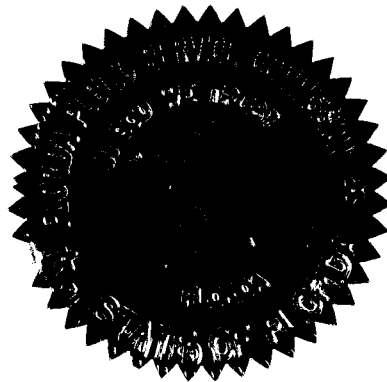


BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

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In the Matter of :
:
Petition of Gulf Power :
Company to determine :
need for proposed :
electrical power plant :
in Bay County. :

DOCKET NO. 990325-EI



VOLUME 1

Pages 1 through 124

PROCEEDINGS: HEARING

BEFORE: CHAIRMAN JOE GARCIA
COMMISSIONER J. TERRY DEASON
COMMISSIONER SUSAN F. CLARK
COMMISSIONER JULIA L. JOHNSON
COMMISSIONER E. LEON JACOBS, JR.

DATE: Monday, June 7, 1999

TIME: Commenced at 10:35 a.m.

PLACE: Betty Easley Conference Center
Room 152
4075 Esplanade Way
Tallahassee, Florida

REPORTED BY: JOY KELLY, CSR, RPR
Bureau Chief, Reporting
Florida Public Service Commission

DOCUMENT NUMBER-DATE
07140 JUN 10 99
CASE RECORDS REPORTING

1 **APPEARANCES:**

2 **RICHARD D. MELSON**, Hopping Green Sams &
3 Smith, P. A, Post Office Box 6526, Tallahassee,
4 Florida 32314; **JEFFREY A. STONE** and **RUSSEL BADDERS**,
5 Beggs & Lane, 700 Blount Building, 3 West Garden
6 Street, Post Office Box 12950, Pensacola, Florida
7 32576-2950, appearing on behalf of **Gulf Power Company**.

8 **GAIL KAMARAS**, Legal Environmental
9 Assistance Foundation, 1114 Thomasville Road, Suite E,
10 Tallahassee, Florida 32303, appearing on behalf of
11 **Legal Environmental Assistance Foundation (LEAF)**.

12 **GRACE A. JAYE**, Florida Public Service
13 Commission, Division of Legal Services, 2540 Shumard
14 Oak Boulevard, Tallahassee, Florida 32399-0870,
15 appearing on behalf of the **Commission Staff**.

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I N D E X

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1 This is going to be difficult trying to work
2 with one mike. What we will do -- what I assume,
3 Robby, is that we can take one of the mikes up here
4 from the Commissioners and give it to LEAF.

5 **COMMISSIONER CLARK:** How about yours?

6 **CHAIRMAN GARCIA:** That would be perfect.
7 You have no idea how much that would please me. We'll
8 have them work with that.

9 **COMMISSIONER CLARK:** I was just kidding.

10 (Laughter)

11 **CHAIRMAN GARCIA:** So anyway, got to be
12 careful around Robby. (Laughter)

13 We're going to be recording this.
14 Obviously, no Internet live transmission is going to
15 be occurring but we're going to tape this and this
16 will be played over the Internet. Obviously no one is
17 going to be participating via phone.

18 Ms. Jaye, are there any preliminaries?

19 **MS. JAYE:** Yes, Mr. Chairman, there are some
20 preliminaries. We've begun adding a new issue in the
21 dockets where there's confidential information, and in
22 this docket it is called Issue 9, and it deals with
23 how the Request for Confidential Classification has
24 been addressed in this docket. And I wanted to go
25 ahead and take care of that up front and let everyone

1 know there are outstanding Notices of Intent to
2 Request Confidential Classification, and I believe
3 that formal requests were filed on June 3rd, 1999, for
4 those items. And those items are the Late-filed
5 Deposition Exhibit Nos. 1, 2 and 4 from the deposition
6 of Witness Pope, and Late-filed Deposition Nos. 1 and
7 2 from the deposition of Witness Burke.

8 **CHAIRMAN GARCIA:** Okay. Why don't you ask
9 the question --

10 **COMMISSIONER CLARK:** Why are we putting that
11 as an issue? Is it just sort of a bookkeeping thing
12 to make sure that we handle them before the docket is
13 closed?

14 **MS. JAYE:** Yes, Commissioner.

15 **CHAIRMAN GARCIA:** Very good. All right.
16 That said, are we ready -- does the Company have any
17 preliminary? LEAF? (No response)

18 Very good. None of these witnesses are
19 stipulated in?

20 **MR. MELSON:** At this point, that's correct.

21 **CHAIRMAN GARCIA:** Okay. Ms. Jaye, I'm going
22 to ask you a favor; if you could keep my exhibit list?

23 **COMMISSIONER CLARK:** I'll do it.

24 **CHAIRMAN GARCIA:** Okay. We'll start. Call
25 your first witness.

1 **MR. MELSON:** Would you like to swear all the
2 witnesses in?

3 **CHAIRMAN GARCIA:** That might be a good idea.
4 Will all the witnesses please rise.

5 (Witnesses collectively sworn.)

6 **MR. MELSON:** Chairman Garcia, before we call
7 the first witness, we'd like to ask that you identify
8 the Need Study that was filed in this docket.

9 **CHAIRMAN GARCIA:** I'm sorry?

10 **MR. MELSON:** Before we start with the first
11 witness, we'd ask that you identify the Need Study
12 that was filed in this docket as Exhibit 1. And along
13 with that Need Study there was a Revised Page 74 and a
14 two-page supplement. All of our witnesses are
15 sponsoring various portions of this Need Study and
16 we'd like to identify it up front, and then we will
17 move it into evidence at the conclusion of all of our
18 testimony.

19 **CHAIRMAN GARCIA:** That will be identified as
20 Exhibit 1.

21 (Exhibit 1 marked for identification.)

22 **CHAIRMAN GARCIA:** Before we go any further,
23 I wanted to point out we have some visitors here. We
24 have Andrew Spahn from USEA, and Commissioner Eduardo
25 Quincoces, who is from Santo Domingo, the Dominican

1 Republic. They are both here to monitor this hearing
2 and other things we do to try to learn some valuable
3 lessons. So let's hope we are all on our best
4 behavior.

5 Is there anything else, Mr. Melson?

6 **MR. MELSON:** No, sir.

7 **CHAIRMAN GARCIA:** Okay.

8 **MR. STONE:** Commissioner, we'll call our
9 first witness, Mr. Robert G. Moore.

10 **CHAIRMAN GARCIA:** Okay.

11 - - - - -

12 **ROBERT G. MOORE**

13 was called as a witness on behalf of Gulf Power
14 Company and, having been duly sworn, testified as
15 follows:

16 **DIRECT EXAMINATION**

17 **BY MR. STONE:**

18 **Q** Mr. Moore, would you please state your name
19 and your position with Gulf Power Company for the
20 record?

21 **A** Robert G. Moore. I'm vice president of
22 Generation and Transmission for Gulf Power Company.

23 **Q** Mr. Moore, did you prefile 11 pages of
24 direct testimony in this docket?

25 **A** Yes, I did.

1 **Q** Prior to this hearing today, there was a
2 Revised Page 6 to your original Direct Testimony. Did
3 you also submit a Revised Page 6?

4 **A** Yes, I did.

5 **Q** Attached to your testimony were two
6 schedules, 1 and 2, that were marked as part of RGM-1.
7 Was that exhibit prepared by you or at your direction?

8 **A** Yes, it was.

9 **MR. STONE:** We would ask that Mr. Moore's
10 testimony be inserted into the record as though read.

11 **CHAIRMAN GARCIA:** Very well.

12 **MR. STONE:** Could we have an exhibit number
13 for RGM-1.

14 **CHAIRMAN GARCIA:** Exhibit number 2.

15 (Exhibit 2 marked for identification.)

16 **Q** **(By Mr. Stone)** Mr. Moore, did you also
17 sponsor Sections 1.9, 9.2 and 9.3 of the Need Study
18 document that has already been identified as Exhibit 1
19 in this proceeding?

20 **A** Yes, I did.

21 **Q** As part of that Need Study, there was a
22 revised Page 74 as mentioned by Mr. Melson earlier and
23 that is part of one of those sections; is that
24 correct?

25 **A** Yes, it is.

1 Q So you are sponsoring those three sections
2 as amended by the revised page; is that correct?

3 A Yes, that's correct.

4 Q Mr. Moore, did you also cause to be filed
5 three pages of Supplemental Direct Testimony in
6 proceeding?

7 A Yes, I did.

8 Q Attached to that Supplemental Direct
9 Testimony was there also is a Schedule 3 that was
10 marked as RGM-2?

11 A Yes, there was.

12 Q And that was prepared by you or at your
13 direction?

14 A That's correct.

15 MR. STONE: We would ask an exhibit number
16 be assigned to RGM-2.

17 CHAIRMAN GARCIA: That will be Exhibit
18 No. 3.

19 (Exhibit 3 marked for identification.)

20 Q (By Mr. Stone) Do you have any corrections
21 to your supplemental testimony?

22 A No, sir, I do not.

23 Q If I were to ask you the questions contained
24 both in your Direct and Supplemental Direct, your
25 answers would be the same?

1 **A** Yes, they would.

2 **MR. STONE:** We've already inserted his
3 direct testimony. We'd ask that his Supplemental
4 Direct Testimony be inserted into the record as though
5 record.

6 **CHAIRMAN GARCIA:** Very well.

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GULF POWER COMPANY

Before the Florida Public Service Commission
Direct Testimony of
Robert G. Moore
Docket No. 990325-EI
Date of Filing: April 5, 1999

Q. Please state your name, business address and occupation.

A. My name is Robert G. Moore, and my business address is One Energy Place, Pensacola, Florida 32520. I am Vice President of Power Generation and Transmission for Gulf Power Company.

Q. Please summarize your educational and professional background.

A. I graduated from the University of Alabama in 1973 with a Bachelor of Science degree in Mechanical Engineering. My career began as an engineer at Alabama Power Company following graduation in 1973.

In April of 1978, I transferred to Mississippi Power Company (MPC) as a plant engineer in Power Generation at the Company's Daniel Electric Generating Plant. I progressed through increasing levels of responsibility to become Plant Manager in 1984. Then in January of 1991, I transferred to MPC's Plant Watson in Gulfport where I served as Plant Manager.

1 In March 1993, I was promoted and transferred to
2 Georgia Power Company as Plant Manager of Plant Bowen
3 located Northeast of Atlanta. As Plant Manager at
4 both Mississippi Power and Georgia Power Companies, I
5 was responsible for all aspects of power plant
6 operations and maintenance.

7 In July 1997, I was elected to my current
8 position as Gulf Power Company's Vice President of
9 Power Generation and Transmission. In this position,
10 I am responsible for the generation and transmission
11 of electricity and all wholesale bulk power marketing
12 functions. Other areas under my direction are
13 environmental services, system control, fuel
14 procurement, interchange contract administration, and
15 plant construction and engineering.

16
17 Q. What is the purpose of your testimony in this
18 proceeding?

19 A. The purpose of my testimony is to explain why the
20 Company believes construction of a combined cycle (CC)
21 unit at Gulf's Smith Plant (Smith Unit 3) is necessary
22 and to affirm the Company's commitment to this
23 project. I will also provide a brief description of
24 the unit and its estimated costs.

1 Q. Have you prepared an exhibit that contains information
2 to which you will refer in your testimony?

3 A. Yes. I have an exhibit consisting of 2 schedules to
4 which I will refer. This exhibit was prepared under
5 my supervision and direction. I am also sponsoring
6 Sections 9.1, 9.2, and 9.3 of the Need Study that was
7 filed in this docket.

8 Counsel: We ask that Mr. Moore's
9 Schedules 1 and 2 be marked as
10 Exhibit 2 (RGM-1).
11

12 Q. What is one of your primary responsibilities with
13 regard to Gulf's generating capacity resources?

14 A. I am the Chief Production Officer for Gulf Power
15 Company. In this role, I am responsible for making
16 sure that the Company has enough generating capacity
17 or purchased power resources to meet its customers'
18 electricity needs. The organization that I direct is
19 responsible for operating and maintaining Gulf's owned
20 capacity and procuring additional resources when it is
21 economic to do so. My organization is also
22 responsible for the planning of the bulk power
23 generation and transmission systems for Gulf Power
24 Company in concert with the other Southern operating
25 companies.

1 A number of employees at both Gulf Power and
2 Southern Company Services have worked for many months
3 on the evaluation process concerning additional
4 capacity. They have made various status reports on
5 this process during the last year to Gulf's executive
6 management and have, in my opinion, looked at the
7 options from every reasonable perspective. Gulf's
8 executives know that Smith Unit 3 is in the best
9 interests of our customers and are committed to the
10 development of this project.

11

12 Q. Would you provide a description of Smith Unit 3?

13 A. Smith Unit 3 will be what is commonly referred to as a
14 2-on-1 combined cycle unit, using the General Electric
15 "F" Class combustion turbine technology. The unit is
16 comprised of two combustion turbines (CT) whose
17 exhaust gases flow through two separate heat recovery
18 steam generators (HRSGs). On a combined basis, the
19 HRSGs will produce 1,800 psig steam in sufficient
20 quantities to power about 170 megawatts of steam
21 turbine/generator capacity. This provides an average
22 generating capability of 521 MW. As discussed later,
23 when power augmentation is used, the total capability
24 is raised to 540 MW.

1 Smith Unit 3 will be a highly efficient, state-
2 of-the-art combined cycle generating unit. Because
3 the new unit will be fueled by natural gas, the
4 environmental concerns associated with the project are
5 minimal. Smith Unit 3 is expected to provide the
6 customers of Gulf with many years of low cost, clean
7 energy.

8 Smith Unit 3 will have a firm supply of natural
9 gas that will come from a new pipeline installation to
10 the Smith Plant. Currently, the Company does not have
11 any plans to provide for a secondary fuel source for
12 this unit because of the expected firmness of the
13 natural gas supply. Since this new natural gas
14 pipeline is to be built and owned by someone other
15 than Gulf, the cost estimate does not include any
16 major gas pipeline costs, but does include connection
17 and metering costs. The pipeline costs are included
18 in the projected cost for natural gas that will be
19 used by the unit.

20 Smith Unit 3 will be located on the existing
21 generating site approximately 1,000 feet north of the
22 Smith Plant 230 KV substation. The unit's output will
23 reach the Company's transmission grid by means of less
24 than 1,000 feet of 230 KV bus. The existing

1 transmission system out of Smith Plant is sufficient
2 to handle the unit's output under normal peak
3 operating conditions.

4 Smith Unit 3 will have an average annual output
5 of 521 megawatts at an efficiency of 6,741 Btu/KWH.
6 The unit will have the capability for power
7 augmentation by steam injection to generate up to 540
8 megawatts of peaking generation at a reduced
9 efficiency of 7,139 Btu/KWH. Schedule 1 contains the
10 operating characteristics of Smith Unit 3.

11 Q. What is the projected installed cost of Smith Unit 3?

12 A. The estimated installed costs for Smith Unit 3,
13 excluding AFUDC and any costs associated with the
14 construction of the natural gas pipeline is
15 \$187,252,000. This estimate is based on a combination
16 of actual vendor quotes and refined engineering cost
17 analyses and includes the costs necessary to comply
18 with all applicable environmental regulations. With
19 respect to most of the components that comprise the
20 project cost, this estimate can be considered
21 relatively firm ($\pm 10\%$). Schedule 2 contains a
22 breakdown of the cost estimate.

23
24 Q. Would you briefly explain the environmental
25 considerations?

1 A. Subsequent to filing the Petition for Need
2 Determination before the Commission, the Company will
3 file its Site Certification Application (SCA) with the
4 Florida Department of Environmental Protection under
5 the Florida Electrical Power Plant Siting Act (PPSA).
6 Smith Unit 3 will be operated in compliance with all
7 applicable federal and state environmental laws and
8 regulations. Two principal environmental issues to be
9 considered are air emissions and any thermal impacts
10 due to the discharge of cooling water from Unit 3.

11 As mentioned above, Smith Unit 3 will be fueled
12 by natural gas. Therefore, the only major air
13 emission issue is that of NO_x. Gulf is pursuing an
14 air emission strategy that will reduce NO_x emissions
15 from one of the existing Smith generating units,
16 leading to a net reduction in total NO_x emissions for
17 the entire plant even after Smith Unit 3 is
18 operational. However, in an abundance of
19 conservatism, the cost estimate used in the
20 evaluations of Smith Unit 3 included the capital and
21 O&M costs of a Selective Catalytic Reduction (SCR)
22 system if needed to control NO_x emissions beyond
23 levels achieved through this strategy.

24 Condenser cooling for Smith Unit 3 will be
25 accomplished by a closed-cycle cooling tower system,

1 which will minimize cooling water withdrawals and
2 discharge. Make-up water for the closed-cycle cooling
3 system will be withdrawn from the existing once-
4 through cooling water discharge canal that serves
5 existing Smith Units 1 and 2. Blow-down from the
6 cooling tower will be routed to the existing discharge
7 canal, downstream of the make-up structure. The blow-
8 down, which will be taken from the cold side of the
9 cooling tower, will result in a slight decrease in the
10 temperature of the cooling water of the discharge
11 canal compared to current conditions.

12 The Company believes that Smith Unit 3 will be
13 permitted for construction and operation under the
14 conditions and strategy that Gulf plans to propose in
15 its SCA. From an environmental standpoint, the
16 proposed facility will have net positive impacts.

17

18 Q. Why does Gulf Power Company need to construct
19 additional generating capacity in 2002?

20 A. Gulf Power Company's current power purchases expire at
21 the end of the year 2001. The Company's load and
22 energy forecast identifies that Gulf has a capacity
23 need of 427 MW beginning in the summer of 2002 in
24 order to achieve an adequate level of reserves. The

1 Company has done everything reasonable in order to
2 meet its customers' needs through 2001.

3 With the identified need beginning in 2002 in
4 mind, the Company has evaluated the options available,
5 performed a test of the market, and has determined
6 that the construction of Smith Unit 3 is the most
7 cost-effective resource choice for Gulf and its
8 customers. Over a 20-year period, Smith Unit 3 will
9 save the Company and its customers at least \$90
10 million compared to the next best alternative. I
11 believe that once the Company has presented its case,
12 this Commission will agree that the Company is making
13 the best choice.

14

15 Q. Please describe the role that Gulf's other witnesses
16 will play in this proceeding.

17 A. The testimony of Margaret D. Neyman and Michael J.
18 Marler will describe the load and energy forecasting
19 process employed by the Company. They will describe
20 how Gulf coordinates its forecasting activities with
21 the other Southern operating companies. They will
22 also present the supply-side and demand-side
23 considerations that ultimately lead to how much
24 customer demand the Company can expect from year to

1 year. This is one of the primary drivers for the
2 resource planning process.

3 The testimony of William F. Pope will describe
4 the Company's resource planning process and how it is
5 coordinated with the other Southern operating
6 companies. He will describe many of the steps the
7 Company goes through in order to develop its
8 individual piece of the Southern plan. Mr. Pope will
9 also describe the self-build option evaluations which
10 first indicated that a combined cycle unit at Gulf's
11 existing Smith Plant was the best internal
12 construction choice for Gulf.

13 The testimony of Maria Jeffers Burke will
14 describe the Company's Request for Proposal (RFP)
15 process and how the analyses of proposals were
16 conducted. Her testimony will show how the various
17 offers compared to the Company's self-build
18 alternative. Ms. Burke will explain the steps taken
19 that ultimately showed that Smith Unit 3 is the most
20 cost-effective option for Gulf's customers.

21 The testimony of M. W. Howell will bring together
22 all of the various facets of the decision-making
23 process that led the Company to settle on the
24 construction of Smith Unit 3. He will summarize the
25 process that led the Company to determine that Smith

1 Unit 3 is the most cost-effective choice for the
2 Company and its customers. Mr. Howell will also
3 provide this Commission the consequences of not
4 meeting the June 2002 in-service date.

5

6 Q. Does this conclude your testimony?

7 A. Yes.

GULF POWER COMPANY

Before the Florida Public Service Commission
Supplemental Direct Testimony of

Robert G. Moore

Docket No. 990325-EI

Date of Filing: May 17, 1999

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Q. Please state your name and business address.

A. My name is Robert G. Moore, and my business address
is One Energy Place, Pensacola, Florida 32520.

Q. Have you previously filed direct testimony in this
docket?

A. Yes.

Q. What is the purpose of your supplemental direct
testimony?

A. Since the Need Study was filed, Gulf has continued to
refine the engineering design for Smith Unit 3 in an
effort to achieve the best overall value. The
purpose of this testimony is to describe the design
changes that Gulf has made, and to update the
construction cost estimate for the unit.

Q. Have you prepared an exhibit that contains
information on these updates?

1 A. Yes. I have an exhibit consisting of one schedule
2 that was prepared under my supervision and direction.

3 Counsel: We ask that Mr. Moore's
4 Schedule 3 be marked as
5 Exhibit 3 (RGM-2).
6

7 Q. What changes has Gulf made in the unit's design since
8 the Need Study was filed?

9 A. Gulf has made changes to the steam fired portion of
10 the combined cycle unit that allow it to produce a
11 higher mass steam flow through the steam turbine.
12

13 Q. What is the effect of these changes?

14 A. As a result of these changes, the summer peak
15 capacity of the unit has increased by 34 MW, from
16 approximately 540 MW to approximately 574 MW. The
17 changes associated with this 6.3% increase in maximum
18 unit capability result in a slight reduction in the
19 average annual output of the unit, from 521 MW to 519
20 MW. They also result in a slight increase in the
21 average annual heat rate for the unit from 6,741
22 Btu/KWH to 6,761 Btu/KWH.
23
24

1 Q. Please describe the change in the total installed
2 cost estimate for Smith Unit 3.

3 A. The total nominal cost estimate for Smith Unit 3 has
4 increased by \$9,670,000 to \$196,922,000. On a per KW
5 basis, the estimated total nominal cost has decreased
6 from approximately \$347/KW to approximately \$343/KW.
7 A breakdown of the updated cost estimate is shown on
8 Schedule 3.

9

10 Q. Has Gulf analyzed the effect of these design and cost
11 changes on the overall cost-effectiveness of the
12 project?

13 A. Yes. Our analysis shows that these design changes
14 provide additional benefits to Gulf and its
15 customers. Ms. Burke will provide the details of
16 this analysis. Based on this analysis, we are asking
17 the Commission to find that Gulf has a need for the
18 574 MW represented by Smith Unit 3, and that this
19 project is the most cost-effective alternative
20 available.

21

22 Q. Does this conclude your testimony?

23 A. Yes.

1 **Q** **(By Mr. Stone)** At this time, Mr. Moore,
2 would you please present a summary of your Direct
3 Testimony and your Supplemental Direct Testimony.

4 **A** Yes. Good morning, Commissioners.

5 As the Chief Production Officer for Gulf
6 Power Company, one of my primary responsibilities is
7 to ensure that we have sufficient generation capacity
8 and/or purchased power resources to meet our
9 customers' needs. My organization is responsible for
10 the operation and maintenance of our Gulf-owned
11 facilities as well as procurement of additional
12 resources for our customers. Also, the organization
13 is responsible for the bulk power transmission system
14 and its coordination with Southern operating
15 companies.

16 A number of employees at Gulf and Southern
17 Company Services have worked several months on the
18 evaluation of this process. In my opinion, they have
19 looked at every reasonable option available. The
20 executives at Gulf know that Smith Unit 3 is in the
21 best interest of our customers, and we feel like that
22 it's a project that we're definitely committed to.

23 Today Gulf filed a Site Certification
24 Application under the Power Plant Siting Act. This is
25 essential for us to move forward with this project and

1 have this generation available by June 2002. This
2 unit is commonly referred to as a 2-on-1 combined
3 cycle unit that we use in GE's F Class combustion
4 turbine technologies.

5 The unit will produce on an annual basis 519
6 megawatts, and as we will discuss later, in an
7 augmented power load it will produce 574 megawatts.
8 Smith Unit 3 will be a highly efficient
9 state-of-the-art combined cycle technology.

10 Today we have several people here to testify
11 and to answer your questions and address your
12 concerns. Also here to testify today are Margaret
13 Neyman and Mike Marler. They are here to answer
14 questions and concerns regarding load and energy
15 forecast processes. Also Bill Pope is here to answer
16 questions and concerns regarding our resource planning
17 process and how it is coordinated with the other
18 Southern operating companies. In addition, Maria
19 Burke is here to answer questions regarding our
20 request for proposals and that evaluation. Her
21 testimony will show how these offers compared to the
22 Gulf's self-build option. And finally, Bill Howell is
23 here to address any other facets of this project that
24 led Gulf to the decision for the self-build option
25 Smith Unit 3, and why we feel like it's the most

1 cost-effective decision for the company and the
2 customers.

3 That concludes my summary.

4 **MR. STONE:** We tender Mr. Moore for cross
5 examination.

6 **COMMISSIONER CLARK:** I just have a
7 preliminary question. Why do you call it 2-on-1 where
8 I think -- aren't there two combustion turbines and
9 then two heat recoveries? Is it two plants on one
10 site?

11 **WITNESS MOORE:** The call it 2-on-1 because
12 you have two combustion turbines and one steam turbine
13 generator. The two combustion turbines exhaust into
14 two heat recovery generators that supply the steam to
15 one steam turbine generator; hence 2-on-1.

16 **COMMISSIONER CLARK:** Okay.

17 **CHAIRMAN GARCIA:** Very good.

18 **COMMISSIONER JACOBS:** Can I ask as a
19 technical novice, what's the benefit of that? You
20 gain some things by doing that?

21 **WITNESS MOORE:** Yes, sir. The primary
22 benefit on a combustion turbine, a lot of heat energy
23 is lost in the exhaust. In this process you take the
24 heat from the exhaust of the combustion turbine, you
25 run that back through a heat recovery boiler and

1 generate steam, dropping the heat and absorbing --
2 converting it to steam energy and then you run that
3 through a steam turbine generator. That, in turn,
4 maximizes the efficiencies that we can gain.

5 **COMMISSIONER CLARK:** So a heat recovery
6 steam generator is different than heat recovery steam
7 turbine? Is there just one turbine for the steam?

8 **WITNESS MOORE:** There's a heat recovery
9 steam generator, in some terms could be called a
10 boiler. The only difference, in this case it's built
11 like a boiler -- it's got tubes with the water in the
12 tubes -- the heat comes from the exhaust of the
13 combustion turbines.

14 **COMMISSIONER CLARK:** But there are
15 essentially two steam boilers that then drive one --

16 **WITNESS MOORE:** Steam turbine.

17 **COMMISSIONER CLARK:** -- one turbine.

18 **WITNESS MOORE:** Yes, ma'am.

19 **CHAIRMAN GARCIA:** Don't explain it to well
20 to the engineers, to the lawyers because -- (Laughter)

21 All right.

22 **MR. STONE:** We tender him for cross
23 examination.

24 **CHAIRMAN GARCIA:** LEAF?

25 **MS. KAMARAS:** LEAF has no questions.

1 **MS. JAYE:** Staff has no questions.

2 **CHAIRMAN GARCIA:** Okay.

3 **COMMISSIONER CLARK:** I have one. I wanted
4 you to clarify the cost of the pipeline.

5 On Page 6 of your testimony you indicate the
6 cost of the pipeline will be carried by somebody else.
7 And then -- wait a minute. I guess it's on Page 5 you
8 say you do not include some costs because the pipeline
9 costs are going to be somebody else's responsibility.
10 And then on 6 it seems like you do include them. Is
11 it just the connection and metering costs that you've
12 included?

13 **WITNESS MOORE:** Yes, Commissioner, that's
14 correct.

15 **COMMISSIONER CLARK:** What is that cost?

16 **WITNESS MOORE:** Commissioner, I don't have
17 the exact number on what that cost is.

18 **COMMISSIONER CLARK:** Who would explain why
19 the environmental net impacts are positive if you're
20 adding another plant?

21 **WITNESS MOORE:** I can try to address that
22 from a broad perspective, if you'd like.

23 What we're proposing to do is look at the
24 site as a whole, the existing site, as to coal-fired
25 boilers, and we're adding a third combined cycle unit.

1 What we're proposing to do is to reduce the total
2 emissions, NOX emissions from the site. In order to
3 do that, we have to go back and make modifications on
4 our existing coal-fired unit to reduce those NOX. Our
5 intent and belief is that we can reduce those NOX on
6 the coal-fired unit enough to more than offset
7 anything that would have been generating on the
8 combined cycle unit.

9 **COMMISSIONER CLARK:** Well, then it strikes
10 me that you could do that separately to the coal-fired
11 units regardless of whether you put in a new natural
12 gas plant.

13 **WITNESS MOORE:** Yes, ma'am, we could. The
14 only issue that comes to hand is the cost of doing
15 that.

16 **COMMISSIONER CLARK:** And by putting another
17 plant there the costs come down?

18 **WITNESS MOORE:** The costs don't necessarily
19 come down, it's just a matter we thought it was more
20 prudent to reduce the emissions out of the coal-fired
21 unit since the new unit we're building is gas-fired
22 and will have less NOX emissions than the existing
23 coal-fired unit.

24 **COMMISSIONER CLARK:** It doesn't strike me
25 that it's a net positive impact because of the new

1 facility. It's a positive impact because of what
2 you're doing to existing facilities.

3 **WITNESS MOORE:** Yes, Commissioner, that's
4 correct.

5 **COMMISSIONER CLARK:** Okay.

6 **COMMISSIONER JACOBS:** As I understand it, as
7 a secondary option you've allowed for the catalytic
8 reduction unit?

9 **WITNESS MOORE:** Yes, sir.

10 **COMMISSIONER JACOBS:** You're just putting in
11 the capital and O&M cost for that?

12 **WITNESS MOORE:** Yes, sir, that's correct.
13 We've included that in the numbers to put this
14 proposal together, and in trying to be conservative we
15 felt like it was prudent to go ahead and include that
16 cost at this time.

17 **COMMISSIONER JACOBS:** Now, what will be the
18 make-or-break point on that? Will you actually keep
19 that in there for the life of the development? Or if
20 you come to a point where you see your efforts with
21 the coal units are affected and you don't need that
22 unit, what is going to happen then?

23 **WITNESS MOORE:** Right now our plan is that
24 that issue is going to be resolved through the Site
25 Certification Application that we filed with the

1 Florida DEP. They are going to address the issues of
2 the environmental.

3 **COMMISSIONER JACOBS:** And so at that point
4 in time you'll make a decision whether or not to
5 follow through with the catalytic unit or not?

6 **WITNESS MOORE:** That is correct. Yes.

7 **COMMISSIONER JACOBS:** I think the other
8 question I have is the pipeline thing.

9 Let me just be sure I understand what's
10 happening with the pipeline. You aren't including
11 costs in your -- but you do have some costs included,
12 don't you, for gas delivery?

13 **WITNESS MOORE:** In our models. And Maria
14 Burke will be the one to give you the details of that.

15 **COMMISSIONER JACOBS:** I'm sorry, who?

16 **WITNESS MOORE:** Maria Burke. We have
17 included numbers in the comparisons that include fuel
18 cost.

19 **COMMISSIONER JACOBS:** Okay. Very good.

20 **COMMISSIONER DEASON:** The NOX limitation, is
21 that a plant or site-specific limitation?

22 **WITNESS MOORE:** In this case we're looking
23 at the site as a whole, yes.

24 **COMMISSIONER DEASON:** And you've determined
25 that it's more cost-effective to implement NOX

1 reductions on the coal-fired facilities?

2 **WITNESS MOORE:** Yes, sir.

3 **COMMISSIONER DEASON:** On Page 8 of your
4 testimony you make reference to the blow-down side,
5 the blow-down which will be taken from the coal side
6 of the cooling tower. And you indicate it will result
7 in a slight decrease in the temperature of the cooling
8 water of the discharge canal compared to current
9 conditions. Could you explain that a little further,
10 please?

11 **WITNESS MOORE:** Basically what we want to
12 try to do is the water we need for the condensing
13 process on this new unit, we have got to take it out
14 of the canal. Our plan is to take it out of the
15 discharge, which mean it's already hot. So for us to
16 condense the steam with it, we have to cool that water
17 back down before we run it through the condenser.
18 Once we run it through the condenser, it goes back to
19 the cooling tower and is reused again and again. But
20 blow-down is a means by which we control the level of
21 the water in the cooling tower. The water that flows
22 from the cooling tower through the blow-down is cooler
23 than the actual discharge temperature. Therefore, we
24 think it's going to have a positive impact on the
25 discharge temperature of the canal.

1 **COMMISSIONER DEASON:** How do you cool the
2 water -- when you take it from the canal you say you
3 cool it so it can be usable in the process. How do
4 you do that?

5 **WITNESS MOORE:** We use mechanical force
6 cooling systems. It is a cooling system that has
7 fan-driven motors on it, and you run this water across
8 a series of trays, and you pretty much oxygenate the
9 water and cools the water down before it's used on
10 Unit 3.

11 **COMMISSIONER DEASON:** And the energy
12 required to run that cooling system, that is already
13 calculated in your net output from this plant; is that
14 correct?

15 **WITNESS MOORE:** Yes, sir, that's correct.

16 **COMMISSIONER DEASON:** And doing this is
17 still the most cost-effective way to address the
18 situation?

19 **WITNESS MOORE:** Yes, sir.

20 **COMMISSIONER JACOBS:** How significant -- the
21 design improvement -- I don't have the vaguest idea
22 what technically this does but it sounds like what you
23 could do, is you could come back in on the existing
24 design and just add some new features to it. Is that
25 essentially what happens?

1 **WITNESS MOORE:** Let me see if I can explain
2 it without getting too bogged down in details.

3 The existing steam turbine generator,
4 combustion turbines, exhaust into the steam recovery
5 units. What we have actually done, in looking at the
6 efficiencies of this process and working with GE, we
7 found that we had an opportunity to increase the
8 output of the steam turbine generator if we could just
9 increase the steam flows; the volume of steam going
10 through the steam turbine.

11 **COMMISSIONER JACOBS:** Going into it.

12 **WITNESS MOORE:** Into the steam turbine
13 generator.

14 **COMMISSIONER JACOBS:** You have two of them
15 leading into the generator. So if you can increase
16 that volume -- okay.

17 **WITNESS MOORE:** And basically what we did,
18 we increased the flow openings going into the steam
19 turbine so we can get more flow through them. And in
20 order to do that, we had to increase some pump sizes
21 and make some additional changes to the heat recovery
22 unit to get the additional steam capacity.

23 **COMMISSIONER JACOBS:** And the numbers that
24 you're looking at are net savings?

25 **WITNESS MOORE:** Yes, sir.

1 **COMMISSIONER JACOBS:** Okay.

2 **CHAIRMAN GARCIA:** Any other questions?

3 Mr. Stone?

4 **MR. STONE:** No redirect.

5 **CHAIRMAN GARCIA:** Very good. Thank you very
6 much.

7 **WITNESS MOORE:** Thank you, Commissioner.

8 **MR. STONE:** We'd like to move Exhibits 2 and
9 3 into evidence.

10 **CHAIRMAN GARCIA:** Okay. If there's no
11 objection, show them moved in.

12 (Exhibits 2 and 3 received in evidence.)

13 **MR. BADDERS:** Gulf Power would like to call
14 as its next witness a panel consisting of Margaret D.
15 Neyman and Michael J. Marler. These witnesses were
16 previously sworn.

17 - - - - -

18 **MARGARET D. NEYMAN**
19 **MICHAEL J. MARLER**
19 were called as a panel of witnesses on behalf of Gulf
20 Power Company and, having been duly sworn, testified
21 as follows:

22 **DIRECT EXAMINATION**

23 **BY MR. BADDERS:**

24 **Q** Would each witness please state their name?

25 **A** (By Witness Neyman) I'm Margaret D. Neyman.

1 My business address is One Energy Place, Pensacola,
2 Florida.

3 **A** (By Witness Marler) I'm Michael J. Marler
4 and my business address is also One Energy Place,
5 Pensacola, Florida.

6 **Q** Did you prefile testimony consisting of ten
7 pages?

8 **A** (By Witness Neyman) Yes, we did.

9 **Q** Do you have any changes or corrections to
10 that testimony?

11 **A** No, we do not.

12 **Q** If I were to ask you the same questions
13 today, would each of your answers be the same?

14 **WITNESS NEYMAN:** Yes, they would.

15 **WITNESS MARLER:** Yes, they would.

16 **MR. BADDERS:** Commissioner, we ask that this
17 prefiled testimony be inserted into the record as
18 though read.

19 **CHAIRMAN GARCIA:** Okay.

20 **Q** (By Mr. Badders) Do you have one exhibit
21 marked as MJM-1 which consists of three schedules?

22 **A** (By Witness Neyman) Yes, we do.

23 **Q** Was this exhibit prepared at your direction
24 or by yourself?

25 **A** Yes, it was.

1 **Q** Are you also sponsoring Chapters 4 and
2 Appendix B to the Need Study document?

3 **A** Yes, we are.

4 **Q** Do you have any changes to either the
5 exhibit or your portions of the Need Study document?

6 **A** No, we don't.

7 **MR. BADDERS:** Commissioner, we ask these
8 exhibits be identified.

9 **CHAIRMAN GARCIA:** They are identified as
10 Exhibit 4.

11 (Exhibit 4 marked for identification.)

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GULF POWER COMPANY

Before the Florida Public Service Commission
Direct Testimony of
Margaret D. Neyman and Michael J. Marler
Docket No. 990325-EI
Date of Filing: April 5, 1999

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Q. Mrs. Neyman, would you please state your name,
business address and occupation?

A. My name is Margaret D. Neyman and my business address
is One Energy Place, Pensacola, Florida, 32520. I am
employed by Gulf Power Company as the Marketing
Services Manager.

Q. Mrs. Neyman, please summarize your educational
background and professional experience.

A. I attended Auburn University and graduated with a
Bachelor of Science degree in Industrial Engineering
in 1980. I began my career in the electric utility
industry at Gulf Power Company in 1981 and have held
various positions within the company in Corporate
Planning, Customer Service, Appliance Sales and
Marketing. In my present position, I am responsible
for Energy Conservation Cost Recovery (ECCR) filings,
pricing, economic evaluations, market research,
forecasting and marketing services activities.

1 Q. Mrs. Neyman, have you previously testified before
2 this Commission?

3 A. Yes, I have testified for Gulf Power Company in ECCR
4 dockets.

5

6 Q. Mr. Marler, would you please state your name,
7 business address and occupation?

8 A. My name is Michael J. Marler, and my business address
9 is One Energy Place, Pensacola, Florida 32520. I am
10 employed by Gulf Power Company as a Senior Engineer
11 in Marketing Services. I am responsible for
12 development of the customer, energy and peak demand
13 projections.

14

15 Q. Please summarize your educational background and
16 professional experience.

17 A. I graduated from the University of South Alabama in
18 December, 1981 with a Bachelor of Science degree in
19 Electrical Engineering. While attending school, I
20 participated in the Cooperative Education program
21 with Alabama Power Company in Mobile, Alabama. Upon
22 graduation in 1981, I accepted a position with Gulf
23 Power Company in Load Research. In this position, I
24 was responsible for the Cost-to-Serve load research
25 including the sampling plan development, data

1 collection, analysis and reporting. I was also
2 involved in other load studies designed to evaluate
3 customer energy usage patterns, end-use load studies,
4 and energy efficiency measures. In 1987, I joined
5 the forecasting section. In this position, I have
6 been responsible for development of the Company's
7 short-term customer, energy, base revenue and peak
8 demand projections and coordination with Southern
9 Company Services in development of the long-term
10 projections. I am responsible for dissemination of
11 the forecast to all of the planning areas of the
12 Company as well as the various federal, state and
13 local governmental and regulatory agencies.

14

15 Q. Have you prepared an exhibit that contains
16 information to which you will refer in your
17 testimony?

18 A. Yes. We have an exhibit consisting of 3 schedules to
19 which we will refer. This exhibit was prepared under
20 our supervision and direction. We are also
21 sponsoring Section 4 and Appendix B of the Need Study
22 filed in this docket.

23 Counsel: We ask that Schedules 1, 2, and 3
24 be marked for identification as
25 Exhibit 4 (MDN/MJM-1).

1 Q. What is the purpose of your testimony?

2 A. Our testimony will describe the load forecasting
3 methodology for Gulf Power Company, the role of
4 conservation programs in the forecast and their
5 effect on the projected growth in system peak demand.
6 Finally, we will provide an overview of the
7 historical forecast accuracy achieved by Gulf's
8 forecasting methodology.

9

10 Q. Mrs. Neyman, in your position, what part do you play
11 in the forecasting process?

12 A. I am responsible for the development of the demand
13 side management (DSM) programs that comprise Gulf's
14 portfolio of conservation initiatives offered to its
15 customers. In this role, I am involved in the
16 program analysis and cost-benefit evaluations that
17 ultimately lead to the selection of DSM programs to
18 be implemented. The programs in Gulf's portfolio
19 offer a wide variety of demand side measures for
20 implementation by its customers. The primary impact
21 of these programs is a reduction in the overall peak
22 demand and energy needs. These reductions are
23 directly reflected in Gulf's load and energy
24 forecast.

25

1 Q. Mr. Marler, in your position, what part do you play
2 in the forecasting process?

3 A. My role is to oversee the development of the
4 customer, energy, and peak demand projections for
5 Gulf. I am specifically responsible for development
6 of the short-term (0-2 year) projections and for
7 interfacing these results with the long-term
8 projections developed by Southern Company Services
9 (SCS) personnel. I work closely with SCS to provide
10 insight and guidance in the development of the long-
11 term projections to ensure the best possible product
12 for use in the Southern electric system (SES)
13 resource planning process.

14
15 Q. Could you briefly describe the SES forecasting
16 process in which Gulf Power Company is involved?

17 A. Gulf Power Company is one of five operating companies
18 of Southern Company, along with Alabama Power,
19 Georgia Power, Mississippi Power and Savannah
20 Electric & Power. Each of the operating companies is
21 responsible for development of customer, energy and
22 peak demand projections for its own system. These
23 projections take into account the latest economic
24 outlook for each of the operating companies as well
25 as the expected impacts of conservation measures

1 unique to each service area, including programs
2 mandated by state and federal regulatory agencies.
3 The individual operating company forecasts are
4 aggregated to a total SES level to provide the
5 projections necessary to coordinate our planning for
6 the growth of the entire SES.

7

8 Q. What approach does Gulf use in preparing its
9 forecasts?

10 A. Gulf uses a variety of different techniques and
11 methodologies depending on the task at hand. These
12 range from short-term forecasts of customer growth,
13 based primarily on input from Gulf's district
14 marketing personnel, to long-range forecasts of
15 energy sales using sophisticated, state of the art
16 computer models such as REEPS and COMMEND.

17 Our peak demand forecast is prepared using the
18 Hourly Electric Load Model (HELM). This model uses
19 load data on individual end uses to produce hourly
20 load curves for the entire Gulf system. This
21 approach enables us to analyze the impact of factors
22 such as alternative weather conditions, customer mix
23 changes, fuel share changes, and demand side
24 programs. A more detailed explanation of Gulf's

1 forecasting process is contained in Chapter 4 and
2 Appendix B of the Need Study.

3

4 Q. Please describe the key results of Gulf's most recent
5 forecast.

6 A. The forecast shows that Gulf expects continued growth
7 in number of customers, though at a slightly slower
8 pace than over the last decade. Average usage per
9 customer remains almost constant between now and the
10 in-service date of Smith Unit 3.

11 Summer peak demand, which is the primary factor
12 that drives Gulf's capacity planning process, is
13 projected to grow by 126 MW, from 2,154 MW to 2,280
14 MW, between 1998 and 2003.

15 Schedule 1 of our exhibit (MDN/MJM-1) contains a
16 summary of the key forecast results. More detail is
17 provided in Appendix B to the Need Study.

18

19 Q. Please identify Gulf's conservation programs.

20 A. Gulf has in place several conservation programs
21 designed to achieve demand and energy reductions in
22 the Residential, Commercial and Industrial classes of
23 customers. These include programs that have been in
24 place for several years as well as the new programs
25 submitted in Gulf's Demand Side Management Plan filed

1 in 1995. These programs are listed on Schedule 2 of
2 our exhibit (MDN/MJM-1) and are described in detail
3 in Section 4.3.4 of the Need Study and Section
4 B.1.4.4 of Appendix B to that study. These programs
5 are designed to provide the maximum amount of cost-
6 effective conservation reasonably available to the
7 Company.

8

9 Q. How does Gulf take into account the anticipated
10 impacts of conservation programs on the peak demand
11 and energy projections?

12 A. Each of Gulf's conservation programs is evaluated
13 individually to determine the historical customer
14 participation trends. Program participation rates
15 are then projected based upon these trends and
16 anticipated changes in participation rates obtained
17 from Gulf's Residential and Commercial marketing
18 program managers. The expected number of
19 participants per year is then multiplied by the
20 demand and energy reductions per participant for each
21 of Gulf's conservation programs. The reductions are
22 then accumulated to determine the total anticipated
23 conservation impacts on summer peak demand, winter
24 peak demand, and annual energy.

25

1 Q. What does this analysis show about the impact of
2 Gulf's conservation programs?

3 A. As indicated in Schedule 3 of our exhibit
4 (MDN/MJM-1), Gulf expects to achieve a total
5 cumulative annual reduction of 365 megawatts (MW) in
6 summer peak demand, 423 MW in winter peak demand, and
7 an annual energy savings of nearly 650 million
8 kilowatt-hours by the year 2002 from what the figures
9 would have been without such programs. More detail
10 on these results is contained in Tables B-1 through
11 B-11 of Appendix B of the Need Study.

12

13 Q. What is Gulf's track record on forecast accuracy?

14 A. Gulf's forecasts have been very accurate. The FPSC's
15 Review of Electric Utility 1998 Ten-Year Site Plans
16 indicated that, of the nine reporting utilities in
17 the state with sufficient available historical data,
18 Gulf's average absolute percent error in retail sales
19 forecast accuracy for the period from 1993 through
20 1997 was 2.5% and ranked third best in the state.
21 Gulf's average forecast error for the same period was
22 estimated to be an under-forecast of 1.19%, which
23 also ranked third in the state. We believe that this
24 is evidence of the high quality of Gulf's forecast.

25

1 Q. Does this conclude your testimony?

2 A. Yes it does.

1 Q **(By Mr. Badders)** I'll ask the witnesses to
2 please summarize your testimony.

3 **WITNESS MARLER:** Good morning,
4 Commissioners. Our testimony describes the load
5 forecasting methodology for Gulf Power Company, the
6 role of conservation programs and the forecast, and
7 the effective conservation measures on a projected
8 growth consistent peak demand.

9 Gulf Power Company is one of five operating
10 companies of the Southern Company, who's responsible
11 for the development of customer, energy and peak
12 demand projections for our own system, which are in
13 turn aggregated to a total Southern system level to
14 provide the projections necessary for the development
15 of our planning for growth.

16 These projections take into account the
17 latest economic outlook for each of the operating
18 companies, as well as the conservation measures impact
19 unique to each service area.

20 Gulf's total forecast employs a number of
21 different forecasting techniques and methodologies.
22 These range from short-term forecasts of customer
23 growth to long range forecast of energy sales using
24 sophisticated models such as REEPS and COMMEND. These
25 efforts are predicated on the philosophy of knowing

1 and understanding the needs, perceptions and
2 motivations of our customers, and actively promoting
3 wise and efficient uses of energy.

4 Our forecasting techniques and methodology
5 have proven to produce very accurate forecasts. The
6 forecasts shows that Gulf expects continued growth.
7 Summer peak demand, which is the primary factor that
8 drives Gulf's capacity planning process, is expected
9 to grow by 111 megawatts by the year 2002.

10 This concludes my portion of our summary.

11 **WITNESS NEYMAN:** Good morning,
12 Commissioners. As Mr. Marler stated, our forecast
13 reflects several conservation programs Gulf has in
14 place designed to achieve demand and energy reductions
15 in all customer classes. These include programs that
16 have been in place for several years, as well as the
17 programs currently included in Gulf's demand-side
18 management plan filed with the Commission.

19 These programs continue Gulf's long
20 tradition of providing conservation programs that
21 focus on delivering customer value, and are designed
22 to achieve the maximum amount of cost-effective
23 conservation reasonably available to the company.

24 There are no additional cost-effective
25 conservation measures that can be undertaken which

1 would mitigate the need for the proposed unit. As a
2 result of these programs, Gulf expects to achieve a
3 reduction of 365 megawatts in peak demand in annual
4 energy saving of nearly 650 million kilowatt hours by
5 the year 2002.

6 This concludes our summary.

7 **CHAIRMAN GARCIA:** Very good.

8 **MR. BADDERS:** We tender the panel for cross
9 examination.

10 **CHAIRMAN GARCIA:** LEAF.

11 **MS. KAMARAS:** We have no questions.

12 **MS. JAYE:** Staff has no questions.

13 **COMMISSIONER CLARK:** I was wondering if you
14 could sort give an explanation of why you think the
15 expected growth in the number of customers will be
16 slightly slower in the future than it was over the
17 last decade?

18 **WITNESS MARLER:** Well, actually we're
19 currently in a pretty good growth period. And as far
20 as percentage terms, it might look slightly lower than
21 it has in the past because the base in total number of
22 customers is growing larger, but our annual customer
23 gains is, indeed, slightly higher than average for the
24 next few years, and it drops back to an average level
25 after that.

1 **COMMISSIONER CLARK:** So you're saying it's
2 the percentage that's going to be less? On Page 7 of
3 your testimony you say that the forecast shows Gulf
4 expects continued growth in the number of customers
5 but at a slightly slower pace than over the last
6 decade. That is counterintuitive to me. It seems
7 like the Panhandle is growing. And I was wondering
8 why your growth would be less in the future?

9 **WITNESS MARLER:** The Panhandle is growing,
10 but in our service area it's starting to get fairly
11 full. And a lot of the growth that's going to take
12 place in the Panhandle in the out-years will take
13 place and that's just outside of where we actually
14 serve, in some of the eastern half of our service
15 area.

16 **COMMISSIONER CLARK:** So is it the percentage
17 that won't be as high or the actual number of
18 customers that won't be as high?

19 **WITNESS MARLER:** The percentage actually is
20 just slightly lower. The number of customers -- as I
21 stated, the annual gain is expected to be slightly
22 higher than the average for the next few years and
23 then drop back to a fairly average level.

24 **COMMISSIONER CLARK:** Okay. Thanks.

25 **COMMISSIONER DEASON:** A question I have also

1 concerns growth and it has to do with the growth in
2 kilowatt-hour per customer.

3 And I've noticed that both for residential,
4 as well as for commercial customers, you're
5 forecasting that that growth is going to be
6 significantly lower than it was for the ten-year
7 period 1989 through 1998, and why is that?

8 **WITNESS MARLER:** Again, we're talking number
9 of customers -- energy.

10 **COMMISSIONER DEASON:** That is a
11 kilowatt-hour consumption per customer. I assume --
12 I'm looking at your exhibit, which has been identified
13 as Exhibit 4, and for the column, 1989 through 1998,
14 that is a ten-year period -- I assume those growth
15 factors, that's an average for the ten years, annual
16 average, correct?

17 **WITNESS MARLER:** Yes, sir. It's the
18 compound average annual growth rate.

19 **COMMISSIONER DEASON:** So, for example, for
20 residential you show that historically it's been 1.1 %
21 and you're forecasting .1% for the period 1998 through
22 2003.

23 **WITNESS MARLER:** Yes, sir. And a lot of
24 that has to do with the impact of our conservation
25 programs. The growth and energy use per customer is

1 driven primarily by price and weather, and it also
2 reflects the adjustments necessary due to our upcoming
3 conservation programs. One of those is the
4 Residential Advanced Energy Management Program that
5 we're getting underway currently. So it ends up
6 holding our long-term kilowatt-hour per customer
7 fairly flat.

8 **COMMISSIONER DEASON:** What would happen if
9 we start seeing growth in consumption per customer
10 which approaches that that was seen historically, they
11 were just -- it would make the need for this plant
12 even greater than it exists under your current
13 forecast?

14 **WITNESS MARLER:** Yes, sir.

15 **COMMISSIONER DEASON:** I have another
16 question, and it has to do with your testimony on
17 Page 6. And it's in reference to the Hourly Electric
18 Load Model and some of the various factors that that
19 model addresses. And one of those factors is fuel
20 share changes. Could you explain that further,
21 please?

22 **WITNESS MARLER:** The Hourly Electric Load
23 Model is a model developed by EPRI, and it's an end
24 use load forecasting model.

25 The inputs for this model come from the end

1 use energy forecasting models that we use, REEPS and
2 COMMEND. Each of those models outputs electric energy
3 consumption projections for heating, air conditioning,
4 water heating, things of that nature. Each of those
5 are input into HELM and modeled under various load
6 shapes that are developed from historical load
7 research data.

8 In the industrial sector the inputs are --
9 for our major handbill industrial customers we have 45
10 customers that we model individually, and their energy
11 forecast and model under their load data that we also
12 collect under the Cost of Service Load Research Rule.
13 And all of these individual load shapes are modeled at
14 the 8760-hour level per year. They are all
15 individually summed together to aggregate a total
16 system 8760-hour forecast.

17 The fuel share changes are reflected in each
18 of the end use energy models that feed into this
19 demand model. Within REEPS, for instance, it models
20 the increase or decrease in electricity consumption
21 relative to gas for heating and air conditioning,
22 water heating, cooking. Similar things happen in the
23 commercial sector for heating and cooking, and all of
24 these individual fuel share changes then feed into the
25 HELM model, and the electricity portion of it is

1 modeled under various load shapes to develop our total
2 system load forecast.

3 **COMMISSIONER DEASON:** What does your model
4 indicate as to the trend in fuel share changes in your
5 service territory?

6 **WITNESS MARLER:** I don't --

7 **COMMISSIONER DEASON:** Are we going to be
8 seeing more gas consumption than electric consumption,
9 or vice versa, as compared to historical?

10 **WITNESS MARLER:** I believe it's vice versa,
11 Commissioner. Our current forecast for electric price
12 is in real terms decreasing relative to gas, and that
13 would indicate an increase in electricity consumption.
14 That would be offset by our conservation programs that
15 we have implemented.

16 **COMMISSIONER DEASON:** And so how does
17 this -- even with that trend you're still forecasting
18 a net reduction in growth in consumption per customer?

19 **WITNESS MARLER:** Actually, it's fairly flat,
20 yes, sir.

21 **COMMISSIONER DEASON:** And these fuel share
22 changes, this primarily affects commercial customers,
23 correct? Or do you also look at how it affects
24 residential customers as far as water heating and
25 things of that nature?

1 **WITNESS MARLER:** Yes, sir. Residential and
2 commercial both.

3 **COMMISSIONER DEASON:** So it affects both.

4 **COMMISSIONER CLARK:** Do you have an
5 understanding of what it is for the other companies in
6 the Southern Company? Do they think consumption per
7 customer is going to be flat, or are they anticipating
8 an increase in consumption per customer?

9 **WITNESS MARLER:** It's different for each
10 operating company.

11 They have varying levels of electric heating
12 saturation, for instance, and different markets. They
13 also have different conservation programs in place
14 that are mandated by their commissions.

15 So I believe the general trend is similar.
16 I'm not positive, but I know it is different for each
17 of the operating companies as far as the -- increasing
18 or decreasing the level of electricity versus gas.

19 **CHAIRMAN GARCIA:** Redirect?

20 **MR. BADDERS:** No redirect. We'd like to
21 move Exhibit 4 into the record.

22 **CHAIRMAN GARCIA:** Okay. Show Exhibit 4
23 admitted into the record.

24 (Exhibit 4 received in evidence.)

25 **MR. MELSON:** Gulf Power calls William F.

1 Pope. Mr. Pope has been sworn.

2 **WILLIAM F. POPE**

3 was called as a witness on behalf of Gulf Power
4 Company and, having been duly sworn, testified as
5 follows:

6 **DIRECT EXAMINATION**

7 **BY MR. MELSON:**

8 **Q** Mr. Pope, would you state your name and
9 address for the record, please?

10 **A** William F. Pope. One Energy Place,
11 Pensacola, Florida.

12 **Q** And what is your position with Gulf Power
13 Company?

14 **A** I'm the Coordinator of Bulk Power Planning
15 for Gulf Power.

16 **Q** And have you prefiled 15 pages of Direct
17 Testimony in this docket?

18 **A** Yes, I have.

19 **Q** And have you also filed a revised Page 12 to
20 that testimony?

21 **A** That is correct.

22 **Q** And in addition to the Direct Testimony,
23 have you filed three pages of supplemental testimony
24 in this docket?

25 **A** Yes, I have.

1 **Q** And is it fair to say that that supplemental
2 testimony updates your direct to reflect a change in
3 the output of the unit as a result of the engineering
4 refinements Mr. Moore discussed?

5 **A** Yes, it does.

6 **Q** If I were to ask you today the same
7 questions that are in your Direct and Supplement
8 Direct Testimony, would your answers be the same?

9 **A** Yes.

10 **MR. MELSON:** Mr. Chairman, I'd ask that both
11 the Direct, with the Revised Page 12, and Supplemental
12 Direct be inserted into the record.

13 **CHAIRMAN GARCIA:** Yes. Show them inserted
14 into the record.

15 **Q** **(By Mr. Melson)** Mr. Pope, did you have two
16 schedules attached to your Direct Testimony identified
17 a WPF-1?

18 **A** That's correct.

19 **Q** A one schedule attached to our Supplemental
20 Testimony identified as WPF-2?

21 **A** That's correct.

22 **Q** And were those schedules prepared by you or
23 under your direction and supervision?

24 **A** Yes, they were.

25 **MR. MELSON:** Mr. Chairman, I'd ask that

1 WPF-1 and WPF-2 be identified as composite exhibit --
2 let me do it separately. Could I ask that WPF-1 be
3 identified as Exhibit 5.

4 **COMMISSIONER JOHNSON:** So it identified as
5 Exhibit 5.

6 (Exhibit 5 marked for identification.)

7 **MR. MELSON:** And could we ask that WPF-2 be
8 identified as Exhibit 6?

9 **CHAIRMAN GARCIA:** Show that identified as
10 Exhibit 6.

11 (Exhibit 6 marked for identification.)

12 **Q** **(By Mr. Melson)** And, Mr. Pope, in addition
13 to those prefiled exhibits, are you also sponsoring
14 Chapters 3, 5, 6, 7 and Appendices C and D of the Need
15 Study that's previously been identified as Exhibit 1?

16 **A** Yes, I am.

17 **Q** Do you have any changes to your portion of
18 that Need Study?

19 **A** No, I don't.

20

21

22

23

24

25

1 employed with the Gainesville-Alachua County Regional
2 Utilities, which is a unit of the City of Gainesville,
3 Florida as a System Planning Engineer.

4 In October of 1978, I joined Gulf Power Company
5 and spent the next eight years in various engineering
6 and supervisory positions at two of the Company's
7 electric generating plants.

8 In April of 1987, I became Supervisor of System
9 Planning which made me responsible for the Company's
10 long range distribution, transmission, and generation
11 planning. On May 1, 1993, I assumed my current
12 position of Coordinator of Bulk Power Planning at the
13 Corporate Office in Pensacola. In this position, I am
14 responsible for supervising the Company's activities
15 for capacity resource and transmission planning for
16 Gulf Power's long-range needs, along with other bulk
17 power operational and planning issues. The activities
18 of System and Bulk Power Planning are deeply
19 integrated with the marketing, load forecasting,
20 financial, power delivery, distribution, and
21 regulatory areas within Gulf Power Company.

22
23 Q. Have you prepared an exhibit that contains information
24 to which you will refer in your testimony?

1 A. Yes. I have an exhibit consisting of 2 schedules to
2 which I will refer. This exhibit was prepared under
3 my supervision and direction. I am also sponsoring
4 Sections 3, 5, 6, and 7, as well as Appendices C and D
5 of the Need Study filed in this docket.

6 Counsel: We ask that Mr. Pope's Schedules 1
7 and 2 be marked for identification
8 as Exhibit 5 (WFP-1).
9

10 Q. What is the purpose of your testimony?

11 A. My testimony will describe the Southern electric
12 system Integrated Resource Planning (IRP) process in
13 which Gulf Power Company participates, the current
14 capacity needs as determined by this process, the
15 specifics of the self-build alternative evaluation
16 process, and how the results of these evaluations led
17 up to the Request for Proposal (RFP) process.
18

19 Q. In your position as Coordinator of Bulk Power
20 Planning, what part did you play in the process
21 leading up to the ultimate decision to pursue the
22 construction of Smith Unit 3?

23 A. My responsibility in this process was to direct the
24 generation and transmission planning for Gulf in its
25 role in the Southern electric system (SES) planning

1 process. As such, I ensure that the interests of
2 Gulf's customers are met when considering the future
3 generation and transmission needs as they are
4 integrated into the planning process of the Southern
5 operating companies.

6

7 Q. Could you briefly describe the Company's planning
8 process?

9 A. Gulf Power is one of the five electric utility
10 operating companies of Southern Company. Together,
11 all of the operating companies - Alabama Power,
12 Georgia Power, Gulf Power Company, Mississippi Power
13 and Savannah Electric & Power - comprise a centrally
14 dispatched resource pool. As such, the companies
15 coordinate their planning for the entire system.
16 Individually, we provide input regarding our
17 customers' load and energy needs in the future. These
18 are in turn used as input into a generation mix
19 analysis in order to formulate overall capacity
20 resource needs for the Southern electric system. A
21 more detailed explanation of Southern's IRP process is
22 contained in Section 3 of the Need Study.

23 A very important portion of this input is Gulf's
24 Load and Energy Forecast, which incorporates
25 reductions due to cost-effective demand-side measures.

1 The summer peak demand is the driver for determining
2 the need for future capacity resources. Gulf's
3 information is combined with the other operating
4 companies' forecasts in order to determine the overall
5 Southern system summer and winter peak demands that
6 must be met in a reliable manner. The details of the
7 forecasting process are covered in the Need Study as
8 well as the testimonies of Margaret D. Neyman and
9 Michael J. Marler.

10

11 Q. Please describe what started the process that
12 ultimately led to Gulf's decision to seek
13 certification for Smith Unit 3?

14 A. Throughout the subsections of Section 3.4 of the Need
15 Study there is a chronology of the SES resource
16 planning and procurement activities for 1995 through
17 1998. For a number of years, Gulf's reserves are low,
18 even with the firm purchases that expire at the end of
19 2001. As mentioned in Section 3, Gulf is able to rely
20 on temporary surpluses on the Southern system to
21 supplement its own capacity resources. However, as
22 those surpluses decline, Gulf must provide resources
23 that contribute a reasonable share to the Southern
24 system's reserve requirements.

1 The 1995 IRP and the subsequent updates in 1996
2 and 1997 indicated that the Company had capacity
3 resource needs ranging between 300 MW and 350 MW by
4 the year 2002. Gulf's corresponding Ten-Year Site
5 Plans contained the Company's plans to satisfy these
6 needs with short-term purchases until the time came to
7 make new capacity resource decisions. Gulf's choice
8 of short-term purchases was primarily aimed at
9 providing the Company time and flexibility before
10 having to consider making an investment in new
11 capacity.

12 The Company did, in fact, participate in a
13 solicitation for short-term capacity and energy issued
14 by Southern Company Services in March 1997. This RFP
15 solicited offers for Gulf's short-term resource needs
16 beginning in 1999. As mentioned in Section 3.4.4 of
17 the Need Study, the offers received in this
18 solicitation confirmed that not only were the amounts
19 of firm capacity getting scarce, but expensive as
20 well. The Company did secure firm capacity as a
21 result of the 1997 solicitation that will expire at
22 the end of 2001. Because of the response to this
23 solicitation, Gulf knew that it needed to look
24 seriously at its capacity resource alternatives to
25 meet the Company's needs for 2002 and beyond.

1

2 Q. How did the Company begin its investigation of
3 capacity resource alternatives?

4 A. As a first step, Gulf started considering its self-
5 build options. In late 1997, the Company launched an
6 investigation of self-build alternatives for its 2002
7 capacity needs. At the time this evaluation was
8 started, the Company's capacity shortfall in 2002 was
9 estimated to be 352 MW according to the newly
10 completed 1998 IRP. This IRP also indicated that Gulf
11 needed a combination of combustion turbine and
12 combined cycle capacity.

13

14 Q. Please describe Gulf's self-build evaluation.

15 A. As outlined in more detail in Section 7 of the Need
16 Study, the Company began looking at a variety of site-
17 specific options. Initially, the Company considered
18 units in the 250 MW range, but quickly changed its
19 focus to a larger unit in the 500 MW range, which more
20 closely matched the Company's capacity need and
21 provided significant economies of scale.

22 Based on the technology screening process already
23 performed as a part of the Southern IRP process, Gulf
24 knew that either a combined cycle (CC) or a combustion
25 turbine (CT) technology would be the most appropriate

1 self-build alternative. Also, because of capacity
2 planning activities of other Southern operating
3 companies for resources in the same time period, the
4 Company had a unit sharing-opportunity to consider as
5 well. The following is a listing of the self-build
6 alternatives that were ultimately considered in this
7 evaluation process:

8

- 9 ♦ Participation in Mississippi Power's Daniel
10 Combined Cycle unit scheduled for a 2001 in-
11 service date
- 12 ♦ Construction of Combustion Turbines at Smith
13 Plant
- 14 ♦ Construction of a Combined Cycle unit at
15 Smith Plant
- 16 ♦ Participation in a Cogeneration unit in the
17 Pensacola area

18

19 Q. Briefly describe how the self-build analysis was
20 conducted.

21 A. The self-build evaluation was conducted on a total
22 cost basis, considering all costs or benefits
23 associated with any particular option. Two of the
24 major factors in the analysis were the cost of the
25 fuel supply and transmission system impacts. Sections
26 7.3.1, 7.3.2, and 7.3.3 of the need study cover these
27 factors and their consideration in more detail.

1 It is important to note that the natural gas
2 supply pricing assumptions were a major uncertainty
3 during the self-build analysis. The Southern system
4 develops a generic natural gas price forecast for the
5 planning process, whose components are a well-
6 established regional commodity price and an average
7 SES transportation cost. When it comes to site-
8 specific evaluations, the only major factor that
9 dramatically affects the natural gas supply price is
10 the pipeline transportation costs. This is
11 particularly significant for a site like Smith Plant
12 where no gas supply currently exist.

13

14 Q. How was the natural gas supply addressed for the Smith
15 site in the self-build analysis?

16 A. As mentioned above, the regional commodity price (or
17 wellhead cost) is well-established and competitive
18 within a region. Therefore, all natural gas commodity
19 suppliers will react in the same manner to price
20 changes by others in the region. On the other hand,
21 gas transportation costs vary quite considerably in
22 different areas in the region. The different gas
23 transportation alternatives that were investigated for
24 the Smith site in the self-build analysis ranged from
25 interconnecting with the closest pipeline, Florida Gas

1 Transmission, to constructing a new pipeline to the
2 plant from Atmore, Alabama.

3 This range of alternative gas supply options was
4 necessary for Gulf to determine if a unit installed at
5 Smith Plant was competitive with the other options.
6 Gulf recognized that the transportation cost
7 assumptions provided by SCS Fuel Department were the
8 best available at the time, but the actual costs could
9 be significantly different once the Company were to
10 actually receive offers from pipeline companies. It
11 was not until after the conclusion of the self-build
12 evaluation that the Company received offers from a
13 number of pipeline companies with more attractive
14 natural gas transportation alternatives. This is
15 covered in more detail in Section 7.3.1 of the Need
16 Study.

17

18 Q. Other than natural gas transportation, does the
19 Company have any other fuel supply concerns?

20 A. Yes. Another major concern to the Company of any
21 natural gas supply alternative is the reliability and
22 firmness of the supply. This is one of the reasons
23 that the construction of a pipeline from Alabama was
24 preferred over non-firm gas service from the FGT
25 pipeline in the self-build evaluation process.

1 Reliability of supply is still a major factor being
2 considered in the current negotiations with those that
3 have subsequently provided the Company with gas
4 transportation offers. Based on what Gulf has already
5 been able to determine in these negotiations, the
6 Company is convinced that a reliable natural gas
7 supply can easily be secured with at least three of
8 the potential suppliers. Gulf expects that by the
9 time the hearings in this docket occur, the Company
10 will have nearly completed its negotiations and
11 secured a reliable and cost-effective natural gas
12 supply for Smith Unit 3.

13

14 Q. Please describe how the self-build alternatives were
15 economically evaluated.

16 A. The self-build process analyzed the cumulative net
17 present value (NPV) for the various alternatives in
18 this evaluation. The analysis included capital costs,
19 fixed and variable O & M costs, fuel costs, and other
20 financial impacts over a twenty-year time frame.
21 These costs were present valued back to 1998 dollars
22 to allow the site-specific alternatives to be
23 evaluated on an equal basis. The total incremental
24 costs of each option, including any required
25 transmission system improvements, were considered when

1 reaching the final results of this evaluation. The
2 combined cycle cost figures that were used in this
3 process were considered preliminary engineering cost
4 figures.

5 Q. What were the results of the self-build analysis?

6 A. Considering all of the cost factors, including
7 construction costs, fuel supply costs, transmission
8 impacts, and system energy costs and savings, the
9 self-build analysis revealed that a 500 MW class CC
10 unit at the Company's existing Smith Plant was the
11 best self-build alternative. Schedule 1 shows the
12 results of the self-build analysis. These results are
13 based on a common megawatt block size to keep all
14 alternatives on equal footing during the analysis.

15

16 Q. Are there any transmission line additions required in
17 connection with Smith Unit 3?

18 A. No. The output of Smith Unit 3 can be integrated into
19 the Northwest Florida grid with no additional
20 transmission lines. However, some upgrades to
21 existing lines are needed and have been included in
22 the cost-effectiveness evaluation of Smith Unit 3.

23 Q. How does the addition of a 500 MW class combined cycle
24 unit affect Gulf's resource needs and reserves for
25 2002 and beyond?

1 A. As mentioned earlier, the 1998 IRP identified a
2 capacity shortage of 352 MW for the Company in 2002.
3 However, Gulf's latest demand and energy forecast and
4 Southern's IRP update for 1999 indicate that Gulf will
5 need 427 MW of capacity resources in 2002 in order to
6 achieve its share of the SES 13.5% summer reserve
7 margin criterion. This further highlights the
8 appropriateness of the installation of a 500 MW class
9 unit in 2002.

10

11 Q. Are there any additional, cost-effective conservation
12 measures that could avoid or defer this unit?

13 A. No. Smith Unit 3 can neither be avoided nor deferred
14 by additional conservation measures. As mentioned in
15 the testimonies of Gulf's witnesses Neyman and Marler,
16 all reasonably available cost-effective conservation
17 measures have already been factored into Gulf's Load
18 and Energy Forecast. With a need by the Company of
19 427 MW in 2002, or approximately 80% of the peaking
20 rating of Smith Unit 3, it would take the cumulative
21 effect of many years' worth of additional conservation
22 measures to have any impact on the timing of this
23 unit. Stated another way, if Smith Unit 3 were not
24 constructed, cost-effective conservation measures

1 would still leave Gulf and its customers seriously
2 short of capacity resources.

3 Likewise, the temporary surplus in capacity of
4 Smith Unit 3 will be fully needed for Gulf's
5 territorial customers and its reserve requirements by
6 the year 2006. Schedule 2 shows the Company's demand,
7 capacity resources, and reserves for the period 1999
8 through 2008 assuming the installation of Smith Unit
9 3. As Table 3-5 in the Need Study shows, the
10 Company's reserves would become negative in 2002
11 without the installation of any resource additions.
12

13 Q. Did the self-build analysis lead to a decision to
14 build Smith Unit 3?

15 A. No. As mentioned before, at this point the Company
16 had fairly evaluated its self-build or participation
17 options. However, Gulf still needed to determine
18 whether the competitive market could provide a more
19 cost-effective alternative to the Company's own
20 construction.
21

22 Q How did Gulf proceed to identify other alternatives?

23 A. Gulf coordinated with SCS and drafted an RFP that was
24 issued on August 21, 1998. The testimony presented by
25 Maria J. Burke details the RFP process and the

1 analyses that were performed on the offers received.
2 It was this evaluation process that led to the final
3 decision to seek certification for Smith Unit 3.

4

5 Q. Does this conclude your testimony?

6 A. Yes.

GULF POWER COMPANY

Before the Florida Public Service Commission
Supplemental Direct Testimony of

William F. Pope

Docket No. 990325-EI

Date of Filing: May 17, 1999

1
2
3
4
5 Q. Please state your name and business address.

6 A. My name is William F. Pope. My business address is
7 One Energy Place, Pensacola, Florida 32520.

8

9 Q. Have you previously filed direct testimony in this
10 docket?

11 A. Yes.

12

13 Q. What is the purpose of your supplemental direct
14 testimony?

15 A. The purpose of my testimony is to provide updated
16 information on Gulf's reserve margins following the
17 addition of Smith Unit 3. This update includes the
18 effect of the 34 MW increase in the unit's peak
19 output that Mr. Moore has described. This
20 information is presented Schedule 3 which is
21 attached to this testimony. This exhibit was
22 prepared under my supervision and direction.

1 Counsel: We ask that Mr. Pope's
2 Schedule 3 be marked as
3 Exhibit 6 (WFP-2).
4

5 Q. What does this exhibit show?

6 A. It shows that the addition of the incremental
7 capacity would allow Gulf to have a summer reserve
8 margin of 19.1% in 2002, gradually decline to 12.4%
9 in 2006.

10

11 Q. Would you describe the transmission impacts of Smith
12 Unit 3 under both normal and contingency situations?

13 A. The addition of the 574 MW of Smith Unit 3 capacity
14 has no adverse impacts on the transmission system
15 under normal peak operating conditions throughout the
16 planning horizon. However, Gulf always plans its
17 system to handle the simultaneous loss of any unit
18 and transmission element (line or transformer).

19 Under the worst case contingency which includes the
20 addition of Smith Unit 3, it will be necessary to
21 increase the load carrying capacity of three
22 transmission lines in the Panama City, Florida area.

23 The lines requiring the upgrades include the Smith to

1 Greenwood, Smith to Highland City, and Highland City
2 to Callaway 115 KV lines.

3 The upgrades to these lines will consist of
4 changing the existing wire to a new wire that will
5 carry more power. This work will be conducted on
6 existing facilities and will not include the addition
7 of any new structures or line segments. None of this
8 work involved with these transmission line upgrades
9 will constitute the addition of "associated linear
10 facilities" for licensing purposes of Smith Unit 3.
11 Furthermore, the cost of these transmission line
12 upgrades was considered in the economic evaluation of
13 Smith Unit 3.

14

15 Q. Does this conclude your testimony?

16 A. Yes.

1 **Q** **(By Mr. Melson)** I believe we're at the
2 point where I can ask you to summarize your testimony.

3 **A** Good morning, Commissioners.

4 In my position as the Bulk Power Coordinator
5 for Gulf Power Company I'm responsible for the
6 capacity resource planning activities of the Company.
7 I provide information necessary to the company to make
8 power supply decisions. It is this information that
9 leads to the need determination process for the most
10 cost-effective capacity resources for Gulf Power
11 Company and its customers.

12 I was involved in the entire process leading
13 to this need determination, including the transmission
14 planning aspects associated with the various
15 alternatives. I'm here today to specifically address
16 the resource planning process, the Company's capacity
17 needs in the year 2002, the initial self-build
18 investigate -- alternative analysis, and the
19 transmission aspects of the various alternatives.

20 My testimony spans the areas from the
21 beginning of the process through the RFP process.
22 Although I was still very much involved in this
23 process through the RFP, any specific issues dealing
24 with those analysis need to be directed to Ms. Burke,
25 who will testify after me.

1 Without any addition of capacity resources,
2 Gulf will have a negative reserve margin in the year
3 2002. Gulf's need in the year 2002 is 427 megawatts.

4 We have determined that the most
5 cost-effective self-build alternative for our
6 customers is the construction of Smith Unit 3.
7 Ms. Burke, as I said, will cover how this option is
8 better for the customers as compared to any others
9 offered to us in the RFP process.

10 Gulf Power Company believes that its
11 presentation of the facts in this need determination
12 clearly demonstrate the need and the most
13 cost-effective -- cost-effectiveness of the Smith
14 Unit 3.

15 Thank you, and that concludes my summary.

16 **CHAIRMAN GARCIA:** Thank you.

17 **Q** **(By Mr. Melson)** Mr. Pope, in your direct
18 testimony you talk about what were then ongoing
19 negotiations for natural gas supply. Have there been
20 some recent developments in that regard that you'd
21 like to update us on?

22 **A** Yes. As of late Friday afternoon, Friday
23 evening, Gulf Power Company did execute a natural gas
24 transportation arrangement and contract for the Smith
25 Unit for 20 years. That's a firm natural gas contract

1 and arrangement.

2 **COMMISSIONER CLARK:** From who?

3 **MR. MELSON:** Commissioner, we may have a
4 confidentiality concern with that. There are some
5 very stringent confidentiality provisions in that
6 agreement.

7 **COMMISSIONER CLARK:** This is for
8 transportation, right?

9 **WITNESS POPE:** That's correct.

10 **COMMISSIONER CLARK:** Well, does it come from
11 FGT or from Atmore? Those are the two alternatives.
12 But if it's confidential, that's --

13 **MR. MELSON:** Commissioner Clark, actually
14 there were, as a result of gas solicitation, I believe
15 the record reflects there were about five alternatives
16 on the table; some existing, some proposed. And at
17 this point I think we do have a confidentiality
18 concern identifying the specific company.

19 **COMMISSIONER CLARK:** I guess I'm confused.
20 I thought you had just two alternatives for
21 transmission, and -- are you buying transmission
22 separate from the supply?

23 **WITNESS POPE:** That's correct.

24 **COMMISSIONER CLARK:** And you have recently
25 negotiated something for transmission?

1 **WITNESS POPE:** Transportation of the natural
2 gas. That's the pipeline aspect of it, whereas the
3 other is the commodity aspect of it.

4 **COMMISSIONER CLARK:** You have not yet
5 negotiated the commodity aspect of it?

6 **WITNESS POPE:** That's correct.

7 **CHAIRMAN GARCIA:** Okay.

8 **COMMISSIONER CLARK:** What -- in Atmore,
9 Alabama, whose pipeline would you go to there?

10 **WITNESS POPE:** That's actually the location
11 of -- two interstate natural gas pipelines are in this
12 area, and that's one of the advantages in looking to
13 that area, you have the opportunity to connect to both
14 for competitive reasons.

15 **COMMISSIONER CLARK:** How far away is Atmore,
16 Alabama from --

17 **WITNESS POPE:** It's approximately 125, 130
18 miles away from the Smith project, by pipeline,
19 depending on the route.

20 **COMMISSIONER CLARK:** Thank you.

21 **CHAIRMAN GARCIA:** Okay. LEAF.

22 **COMMISSIONER JACOBS:** You're not going to
23 own that, are you?

24 **WITNESS POPE:** No, sir. We are responsible
25 for the cost of the metering station and the

1 connection into and on the plant property. I believe
2 Mr. Moore was asked that question earlier. That cost
3 is included in our evaluation process. No, we will
4 not own the pipeline outside the plant property.

5 **CHAIRMAN GARCIA:** Ms. Kamaras?

6 **MS. KAMARAS:** LEAF has no questions.

7 **CHAIRMAN GARCIA:** Staff.

8 **MS. JAYE:** Staff is going to pass out a
9 composite exhibit. This exhibit has information
10 dealing with both Witness Pope and Witness Burke, and
11 Staff will be referring to it during the cross
12 examination of these two witnesses.

13 **COMMISSIONER JACOBS:** While you're doing
14 that, there's no backup fuel for this; is that
15 correct?

16 **WITNESS POPE:** That's correct. We had not
17 planned on having a backup fuel source for Smith Unit
18 3 because of the approach of securing a firm natural
19 gas supply.

20 **COMMISSIONER JACOBS:** Say that again?

21 **WITNESS POPE:** Because of the efforts to,
22 and success in, acquiring the firm natural gas supply,
23 it really does not benefit us from a reliability
24 standpoint.

25 **MS. JAYE:** Staff's composite exhibit does

1 have the component that is confidential. It is being
2 handed out in manila envelopes that are marked
3 "Confidential." The pages that refer to confidential
4 information in the redacted version so state. Staff's
5 questions will refer to confidential information but
6 will but not refer to any exact nature of that
7 information. We will not delve into that and ask for
8 any disclosure of confidential information. (Pause)

9 I'm waiting for Chairman Garcia to get an
10 identification --

11 **COMMISSIONER DEASON:** That's what I'm here
12 for.

13 **MS. JAYE:** Commissioner Deason, could we get
14 an exhibit number for Staff's composite exhibit
15 consisting of both the redacted and the confidential
16 version.

17 **COMMISSIONER DEASON:** Sure. What's the next
18 exhibit number?

19 **MS. JAYE:** Exhibit No. 7.

20 **COMMISSIONER DEASON:** 7.

21 **MR. MELSON:** Just so I'm clear, was that
22 the -- that's this? (Indicating)

23 **MS. JAYE:** It will be both of those together
24 identified; the redacted version and confidential
25 version. (Pause)

1 Staff has informed me they need two
2 exhibit numbers for this; one for the nonconfidential
3 exhibit and one for the confidential exhibit.

4 **COMMISSIONER DEASON:** The nonconfidential
5 will be identified an Exhibit 7. The confidential
6 exhibit will be identified as Exhibit 8.

7 (Exhibits 7 and 8 marked for
8 identification.)

9 **Q (By Ms. Jaye)** Mr. Pope, if you would,
10 please turn to Page 119 of the nonconfidential exhibit
11 which has now been marked as Exhibit 7.

12 **A** Okay.

13 **Q** Take a look between Pages 119 and 191 and
14 tell me if you recognize this document?

15 **A** Yes.

16 **Q** Could you tell me what it is, please?

17 **A** This is the deposition -- my deposition
18 taken May 10, 1999. It's a transcript of it.

19 **Q** Do you have any changes to that document?

20 **A** No, I don't.

21 **Q** I have a question about transmission studies
22 for you. When transmission studies are performed in
23 order to evaluate the impact of the proposed
24 generating unit addition in Gulf's territory, are
25 those studies performed by Southern Company Services

1 or by Gulf?

2 **A** Southern Company Services.

3 **Q** And the analysis that Southern Company
4 Services use, are those based upon impacts on Gulf
5 Power's service territory or upon the entire Southern
6 Company system?

7 **A** The studies are performed using the Southern
8 Company -- an entire Southern Company, and a reduced
9 representation of the transmission system just outside
10 of Southern Company. So when you ask about study
11 results and what they result in, there will be impacts
12 to the entire Southern Electric system as a result of
13 any study done. Now, what is of concern to Gulf is
14 only those things that are caused by Gulf's unit and
15 transmission line outages and what impacts those.

16 **Q** Could you describe the general power flows
17 on Gulf's system as it now stands?

18 **A** Yes. I believe today, if you were to look
19 at the flow of power on Gulf Power Company's system,
20 there's a flow of power from the west towards the
21 east. And the reason for that is that there's
22 significantly more generation from the
23 Pensacola/Mobile/Pascagula/Gulfport area as opposed to
24 the load. There's load -- load all up and down that
25 area, but there's also load to the east of us,

1 Fort Walton Beach, Panama City, Graceville, Quincy, on
2 over to Jacksonville where there's other significant
3 amounts of generation.

4 So if you'll see, generation has to get to
5 where it is consumed. That's where the load is.
6 There's predominantly more generation to the west than
7 there is between here and Jacksonville, with the
8 exception of the Farley nuclear power plant in Dothan.
9 So there's a predominant flow of power through Gulf
10 Power Company's system and through southern Alabama's
11 system, from the west towards the east.

12 **Q** Does this result in a mismatch between load
13 and generation in the Panama City area?

14 **A** There is a mismatch of load and generation
15 in the Panama City area, in that surrounding area
16 there.

17 **Q** Is that mismatch the reason that Gulf's RFP
18 stated new units built near Panama City would have a,
19 quote, "significant transmission cost advantage"?

20 **A** It is a significant factor, particularly
21 when looking at your alternatives of other generation
22 resources, as well as the Smith Unit 3. Generation in
23 the Panama City area provides you a tremendous, I
24 guess, shift in that mismatch of having more load than
25 generation in the area. Now you have generation

1 sufficient to meet that load and actually export a
2 little bit of that generation to other areas, such as
3 Fort Walton Beach to the west of Panama City, reducing
4 the impacts on the transmission system for a number of
5 years.

6 Q If you would please refer to Staff's
7 composite exhibit, this would be on Page 9, this is
8 Gulf's Response to Staff's Interrogatory No. 4.

9 A I've got it.

10 Q Is this page, with the different respondents
11 on it, reflect that Smith Unit 3 has the best
12 transmission cost advantage over the RFP respondents?

13 A Yes, it does.

14 Q And is this because Smith Unit 3 is closest
15 to Panama City, thus requiring fewer transmission
16 additions and upgrades?

17 A That's correct.

18 Q Is there a backup fuel source for Smith Unit
19 3 as proposed?

20 A No, there is not.

21 Q Why does Gulf not plan to have a backup fuel
22 source for Smith Unit 3?

23 A Primarily the reason is the need or
24 cost-effective need of it. The Company's strategy on
25 Smith Unit 3 is to have a firm natural gas supply,

1 sole source natural gas supply as a fuel for this
2 unit. Having a backup fuel, although it would provide
3 the company with the opportunity, if for some
4 unforeseen reason that natural gas supply was
5 interrupted, to generate on fuel oil or some other
6 alternative fuel. However, Gulf's planning criteria
7 is predicated on a unit and a line, transmission line
8 or transmission element out. It can be any unit. So
9 if you were to take Smith 3 and take it off line as a
10 unit in our contingency planning criteria, and any
11 line, our planning criteria says we will still be able
12 to serve the customers. Our system, both transmission
13 and other generation, is sufficient to provide the
14 customer with power. So there is no need, from a
15 reliability standpoint on Gulf Power Company's part,
16 to have a backup fuel in the event there was a
17 interruption of the natural gas supply. It's not our
18 idea that we would ever expect that. But if it were
19 to happen, reliability criteria says we're not going
20 to lose customers.

21 **COMMISSIONER DEASON:** Let me ask a question
22 at this point. You indicated, I believe, in your
23 summary that without Smith Unit 3 in the year 2002
24 you'd actually have a negative reserve margin.

25 **WITNESS POPE:** That's correct.

1 **COMMISSIONER DEASON:** So how do you
2 reconcile that statement with the testimony you just
3 gave?

4 **WITNESS POPE:** The reserves, capacity
5 reserves, are calculated based on the Company's
6 generation resources compared to its load. Negative
7 reserves means that the load would exceed what Gulf
8 has in capacity resources from all sources, that's
9 constructed or purchased -- that we have entitlement
10 to. It can still be negative, and it has been
11 negative in some years in the past, and we've still
12 been able to provide power to the customers because of
13 the transmission system and other temporary excess
14 reserves of other companies, such as the other
15 Southern operating companies, or other things that
16 could be bought on an emergency basis. The planning
17 criteria does not presume that we're going to make
18 emergency purchases, but it allows the transmission
19 system itself to operate. And if those facilities are
20 sufficient to provide the customer with the power,
21 then we feel that's sufficient.

22 In this case, even without Smith Unit 3 and
23 another transmission line out, we could get the power
24 to the customer. It stretches the system but we still
25 could do it.

1 **COMMISSIONER DEASON:** So that capacity would
2 be served by either off-system purchases or else
3 purchases within the Southern system that would come
4 into Gulf's territory?

5 **WITNESS POPE:** The power flows would come,
6 Commissioner, when you look at reliability -- testing
7 the system for reliability, at that point in time
8 you're not concerned about where it's coming from or
9 what the economics are, but mainly would it be likely
10 available. In the planning criteria there is some tie
11 assistance from outside Southern that allows those
12 powers to flow into other parts of Southern Company.
13 But what's more of concern to Gulf Power Company in
14 its region is, is the system in the immediate area,
15 around Gulf Power Company's service area, sufficient
16 to get all possible available flows and generation
17 into it if you had that event?

18 I guess you're asking is our assumption that
19 we would buy it? I don't believe -- that's not really
20 part of our study when we studied reliability, other
21 than the standpoint that we do have some tie
22 assistance modeled from an electrical standpoint; it's
23 not a "Can we go buy a kilowatt from Duke" or someone.

24 **COMMISSIONER DEASON:** Well, it would seem
25 that if -- without Smith Unit 3 you're going to be in

1 a negative reserve margin position, you've got to get
2 it from somewhere other than your own system.

3 **WITNESS POPE:** That's correct.

4 **COMMISSIONER DEASON:** And then I guess the
5 question is if you looked at the economics of that,
6 and made any assumptions as to what you would have to
7 pay to purchase that, and compare that with the cost
8 of having dual fuel capability at Smith 3.

9 **WITNESS POPE:** That's correct, Commissioner.
10 When you -- have we investigated that? This whole
11 process, and this need determination, is a culmination
12 of all those looks at things; our market tests. We
13 went out for RFP for other alternatives to the
14 construction of Smith 3. We've also done looks into
15 the market for the near and long term -- to determine
16 the economics of that. The power available other than
17 things that came out of our RFP process, the power
18 amounts are getting very scarce, plus they are getting
19 very expensive. Those are in the economics considered
20 here and that basically comes down to Smith is
21 still -- Smith 3 is still the most cost-effective when
22 looking at all of those things available to us. Yes,
23 sir, we have done that.

24 **COMMISSIONER CLARK:** Just so I'm sure I
25 understand what you're saying, you have looked at

1 providing -- the cost of providing backup fuel to this
2 unit and compared it to the cost of purchasing power
3 elsewhere and bringing it in. And have concluded from
4 a cost-effective basis, that it's not cost-effective
5 to have backup fuel for that unit; it's better to rely
6 on the transmission system to bring in needed
7 capacity.

8 **WITNESS POPE:** Commissioner Clark, the
9 economics of providing backup fuel, there's an
10 additional cost -- there would be an additional cost
11 for the Smith Unit 3. And the evaluation of that cost
12 is to the extent of whether it's needed. I cannot say
13 that I've gone and said, well, I believe the unit will
14 be off-line so many hours in a particular summer peak
15 period, and what would it cost me to buy power from
16 someplace else? And are those two costs equal?

17 **COMMISSIONER CLARK:** Or is the purchase of
18 the power less than putting in the backup fuel?

19 **WITNESS POPE:** That's correct. I can't tell
20 if that's more or less. I did not look at that
21 particular aspect of it.

22 But, moreover, I looked at am I getting
23 anything from the costs of adding backup fuel when I'm
24 still going to provide power to my customers for an
25 emergency, say, a forced outage. Those are the kinds

1 of things that are more prevalent to cause a unit to
2 come off when you need it, and that's the boiler
3 outages. There was a question about natural gas
4 curtailments or interruptions; that's something that's
5 less likely than a boiler outage. And a boiler
6 outage, whether you had backup fuel or not -- wouldn't
7 help you if you had backup fuel. So you're going to
8 have to rely on other sources of power for those
9 particular instances in any unit.

10 No, I did not specifically look at it will
11 cost me blank-million dollars to put backup fuel up,
12 and the two hours that I'm going to buy backup power,
13 as opposed to backup fuel, costs me this much. I
14 didn't do that. Our approach with backup fuel is do
15 you need it, compared to getting a firm natural gas
16 supply.

17 **COMMISSIONER DEASON:** Well, explain to me a
18 situation then under that analysis which would ever
19 show that a plant needs to have backup fuel
20 capability.

21 **WITNESS POPE:** Let me make sure I
22 understand, Commissioner Deason, what you're asking.

23 I believe you asked me that under -- looking
24 at any plant, name a scenario where you would ever
25 justify backup fuel.

1 I can't, off the top of my head, really
2 think about a situation yea or nay. I believe every
3 plant would need to be looked at differently. I
4 believe there are enough cons, enough drawbacks to
5 backup fuel issue with Smith Unit 3 and other combined
6 cycle units that are going to be running on its
7 primary fuel for long periods of time to not justify
8 the backup fuel.

9 Backup fuel, deviating from firm supply of
10 natural gas, means a couple of things, a number of
11 things. You have to provide for dual fuel firing
12 capability of the combustion turbines, which is a
13 whole new set of combusters, fuel nozzles and
14 controls. The fuel storage system, the fuel piping
15 system and delivery system to the unit, if that system
16 is not used and exercised from time to time, sediments
17 start to settle out in it; moisture develops in it,
18 and when called upon to be used, there are a lot of
19 problems associated with that.

20 We know from experience -- we have one other
21 combustion turbine that is an oil-fired unit. It's
22 for peaking purposes only. But if we don't exercise
23 it and run it for a hour a month to make sure that all
24 of its equipment -- its water separators and things
25 like that are working, it won't run when we call upon

1 it. That's something you have to do with a combined
2 cycle unit for a far more -- for a larger expense.
3 While you're burning oil through it to make sure
4 everything runs, that's a higher cost to your
5 customers than would otherwise be needed, and all to
6 protect yourself from -- in this case natural gas --
7 supply interruption.

8 To go back to your question, I really can't,
9 without looking at every specific unit, whether it be
10 a coal-fired unit to begin with or whatever, as to
11 what those circumstances would be to dictate backup
12 fuel is justified.

13 **COMMISSIONER DEASON:** Well, I take your
14 answer basically to say that you have not done this
15 specific economic analysis to show whether dual fuel
16 capability is cost-effective, but that intuitively
17 you've dismissed it because of the operating problems,
18 maintenance problems; the likelihood of the need to
19 have that capability. But you actually have not done
20 the analysis. Am I characterizing your response
21 correctly?

22 **WITNESS POPE:** Not the economic comparison
23 directly with the cost of providing backup fuel versus
24 the cost of buying power if those situations were to
25 exist. Because as far as customer service goes and

1 power to the homes, it's not interrupted because of an
2 outage of the unit. Backup fuel won't help that.

3 **COMMISSIONER DEASON:** And I understand that.
4 You've looked at it from a reliability standpoint.
5 And that if there is -- if Smith Unit 3 goes off line
6 because of unavailability of fuel, the system is such
7 that that power loss can be replaced somehow, and that
8 reliability is going to be maintained. And I
9 understand that and I can accept that. My question is
10 yes, but at what cost to the customer?

11 There could be a scenario -- and I don't
12 know what the situation is in this case -- but it
13 could be that the customer would be better off with a
14 dual fuel capability to avoid paying potentially
15 higher cost through a fuel adjustment clause to
16 replace that. Or the scenario could be that the
17 likelihood of that happening is so remote that -- and
18 the up-front capital cost of having to install the
19 various apparatus to allow you that dual fuel
20 capability, plus operating complexities of doing so,
21 doesn't justify it.

22 And I guess my concern is that the economic
23 analysis has not been done, while from a reliability
24 standpoint there's no problem. My concern is how can
25 we assure the customer that he or she is better off

1 not having dual fuel capability?

2 **WITNESS POPE:** I agree with you,
3 Commissioner. I do not have that number of what it
4 would cost to replace. I do know that it would cost
5 you roughly six to \$8 million in capital cost up
6 front. And it would cost you an additional million to
7 a million and a half, to maybe \$2 million a year just
8 in O&M costs without ever having to burn the dual
9 fuel, okay. And for a natural gas, or for a fuel
10 supply interruption, considering just a million or so
11 dollars a year in the capital cost, I can't see it
12 being greater than -- I can't see the cost of
13 replacement fuel being greater than that. But I have
14 not done it, you're right.

15 **COMMISSIONER CLARK:** You mean the cost of
16 replacement power would be greater --

17 **WITNESS POPE:** Excuse me. Replacement
18 power, that's correct.

19 **COMMISSIONER JACOBS:** If I recall, one of
20 the premises of your need was the expiration of your
21 purchased power contract; is that correct?

22 **WITNESS POPE:** That's correct.

23 **COMMISSIONER JACOBS:** Are you
24 anticipating -- maybe I didn't catch it, are there
25 going to be contracts then that essentially serve as

1 your alternatives -- your backup, I'm sorry -- will
2 you have additional purchased power contracts?

3 **WITNESS POPE:** No, sir. For an outage of a
4 natural gas supply or something like that --

5 **COMMISSIONER JACOBS:** Right.

6 **WITNESS POPE:** No, sir.

7 **COMMISSIONER JACOBS:** Is that an option that
8 you could explore?

9 **WITNESS POPE:** I guess we could but it's
10 really not necessary nor justified from the standpoint
11 that if you take a normal unit, any unit is going to
12 have a forced outage rate; something that's going to
13 force it off the line. And we don't today contract
14 for backup power during those events. They are very
15 few and far between -- it really is not necessary.

16 **COMMISSIONER JACOBS:** For your planning
17 purposes then you're essentially saying that the
18 likelihood of there being these outages is so low that
19 you don't see the need to kind of hone in on that
20 event and tailor a contract to service that outage.

21 **WITNESS POPE:** No. And that is one of the
22 major reasons that people plan to have reserves above
23 what your load is, is to account for unforeseen
24 events. So in a way we do plan for that and provide
25 for it in reserves.

1 **COMMISSIONER JACOBS:** You can see the
2 concern. What you're saying is without this plant you
3 have a negative reserve.

4 **WITNESS POPE:** That's correct.

5 **COMMISSIONER JACOBS:** So if this plant goes
6 down, you'd have to come up with something. And what
7 my question is, is what you're essentially going to do
8 is go to the spot market at that time; is that
9 correct?

10 **WITNESS POPE:** Instantaneously we would rely
11 on the electrical system, the grid itself.

12 **COMMISSIONER JACOBS:** Who would you be
13 purchasing from?

14 **WITNESS POPE:** It would come from our
15 interconnection agreements with -- and our pool
16 arrangement with the Southern electric system. Most
17 likely if it were to happen, the Southern electric
18 system would pick up generation and other dispatched
19 units that we're already a part of and make up that
20 power; it wouldn't have to come from outside.

21 **COMMISSIONER JACOBS:** What's the guidepost
22 there? What's the cap? Are you essentially going to
23 pay what the market will bear or what?

24 **WITNESS POPE:** It won't be market; it will
25 be incremental generation cost from the Southern

1 electric system for those. That's the pool we're
2 already a member of anyway.

3 **COMMISSIONER JACOBS:** Okay.

4 **CHAIRMAN GARCIA:** Mr. Jaye, do you want to
5 continue?

6 **MS. JAYE:** Yes, Commissioner.

7 **COMMISSIONER CLARK:** Let me just ask a
8 question. You're saying you would purchase from other
9 Southern Company generating facilities at your
10 interexchange rate and you have schedules, right, for
11 those purchases from the Southern Company system?

12 **WITNESS POPE:** There's no purchases from the
13 Southern electric system. The Southern electric
14 system is essentially a dispatched pool. We're all
15 part of the Southern electric system, which is
16 dispatched on an incremental basis anyway. We don't
17 have schedules as such. The system is -- units are
18 committed to meet peak demands on a daily basis, and
19 whatever unit is the next economic choice will be
20 picked up by computer program; it picks them up.

21 **COMMISSIONER CLARK:** Suppose your plant that
22 you're building would be the next choice but it's off
23 line so you go to the next choice up. You would be
24 paying that higher cost by going to the next unit up.

25 **WITNESS POPE:** As we do today, that's

1 correct.

2 Q (By Ms. Jaye) Mr. Pope, has Gulf modeled
3 the percentage likelihood of gas interruptions per
4 year for the Smith Unit 3?

5 A No.

6 Q Is backup fuel unnecessary, in your opinion,
7 because, among other things, the Southern Company
8 system has very little gas-fired capacity and uses
9 mostly coal?

10 A Yes. Diversity of the fuel is a major plus.

11 Q If Gulf were to have a backup fuel source
12 for the proposed Smith Unit 3, what type of fuel would
13 Gulf choose with both the commodity and storage, and
14 how much backup fuel would be stored? And for that
15 I'd like the number of days burned at the 100%
16 dispatch.

17 A I believe the basic assumption would be
18 No. 2, low sulfur No. 2 oil, with a three days tankage
19 at 100% dispatch.

20 Q Mr. Pope, would you please refer to Staff's
21 composite exhibit, which has been identified as
22 Exhibit 7 on Page 31. This is Gulf's response to
23 Staff's Interrogatory No. 35. I'll give you moment to
24 take a look at that. (Pause)

25 A Okay.

1 **Q** Given Gulf's response to this interrogatory,
2 if a backup fuel source were to be required by the
3 Commission, would Smith Unit 3 still be the most
4 cost-effective alternative available to Gulf?

5 **A** Yes, it would.

6 **Q** Has Gulf prepared a contingency plan in the
7 event that the fuel supply is interrupted to Smith
8 Unit 3?

9 **A** Repeat that again, please?

10 **Q** Has Gulf prepared a contingency plan in the
11 event that the natural gas fuel supply is interrupted
12 to Smith Unit 3?

13 **A** No, we haven't.

14 **MS. JAYE:** I need just a moment. (Pause)

15 **COMMISSIONER CLARK:** Mr. Pope, you may want
16 to kick this to somebody else, but can you sort of
17 explain why Smith Unit 3 was so much less than the
18 other alternatives turned in with the RFP process?

19 **WITNESS POPE:** I believe Ms. Burke would
20 probably be the best one to answer that. She's the
21 one that did the analysis and knows most intimately
22 the results of the RFP process.

23 **COMMISSIONER CLARK:** You would have no
24 information about the RFP process? You sort of just
25 put your bid in and they analyzed all the bids.

1 **WITNESS POPE:** I personally was still
2 involved very much -- and still am -- involved in the
3 whole process. But as far as the details and
4 evaluation, the analysis, Ms. Burke would be the best.
5 And I think she would be best to direct those
6 questions to. I'd be glad to try and answer --

7 **COMMISSIONER CLARK:** I was wondering if it
8 had anything to do with transmission because some of
9 them were in Hardee County.

10 **WITNESS POPE:** Oh, yes. Yes.

11 **COMMISSIONER CLARK:** Hardee County is down
12 in the middle of the state, right?

13 **WITNESS POPE:** With regard to transmission
14 aspects, I'd be glad to answer any of those because
15 that's -- basically I was in charge of directing the
16 people at Southern in transmission planning to provide
17 her with those numbers where those alternatives were
18 evaluated. Yeah, I'll answer transmission questions.

19 **COMMISSIONER CLARK:** I'm just wondering. I
20 mean, the next lowest is \$200 per kilowatt more than
21 yours; not quite twice as much. Do you have any feel
22 for why they came in so high?

23 **WITNESS POPE:** Transmission is a portion of
24 it, but I believe -- and Ms. Burke really is the best
25 one to answer this -- she can tell you relatively

1 which was more of a factor than others. But
2 transmission was a factor in all of the alternatives.

3 Q (By Ms. Jaye) Mr. Pope, Staff is going to
4 ask for a late-filed hearing exhibit detailing a
5 contingency plan in the event that there is an
6 interruption in the natural gas fuel supply to Smith
7 Unit 3. If we could identify that as an Exhibit 9, as
8 Late-filed Hearing Exhibit 9.

9 WITNESS POPE: Let me just ask a question.
10 Beyond what the normal unit operations would be,
11 because I'm trying -- I'm going to answer this just
12 exactly where we break from -- there is no contingency
13 plan other than what our planning criteria outlines,
14 and that is under a unit out, which could be this
15 unit, and a transmission line, the system is still
16 okay. The grid is still intact and operating at
17 acceptable levels. That's not a specific contingency
18 plan but it's our contingency plan of sorts. Beyond
19 that, I'd like to know what more that you'd like.

20 Q Is that the plan that Gulf would rely upon
21 should this unit go down because there isn't a natural
22 gas supply coming into it?

23 A Absolutely.

24 Q If you could provide that in writing then
25 for us as a late-filed hearing exhibit.

1 **MR. MELSON:** Chairman Garcia, the witness
2 essentially has said "This is everything I have that
3 would go on a contingency plan." I don't know what
4 benefit we get by having that written down. I don't
5 believe -- based on what I heard him say, I don't
6 believe he has anything to add beyond what he's said
7 up to this point.

8 **CHAIRMAN GARCIA:** Ms. Jaye, what are you
9 looking for?

10 **MS. JAYE:** This information was requested by
11 Mr. Bob Trapp and he felt it would be necessary to
12 have something in writing for the record. However, if
13 having it in the transcript, as we have today, is
14 under sworn testimony, would be fine for him -- and
15 I'm getting a nod from the back of the room, from
16 Mr. Tom Ballinger that that would be fine, then I'm
17 willing to move on.

18 **COMMISSIONER JACOBS:** Let me suggest this, I
19 think it would be useful to have a scenario analysis.
20 And that scenario analysis would essentially look at
21 the present fleet, Southern Company fleet, and how it
22 would be dispatched in this event that we are --
23 contingency event. I assume -- and you can make
24 whatever assumptions you think are reasonable -- but I
25 think it would be useful to have that kind of scenario

1 analysis, if we could get that.

2 **WITNESS POPE:** To understand that, what
3 you're speaking of, Commissioner, is a
4 before-and-after picture of the Southern generation
5 system.

6 **COMMISSIONER JACOBS:** In the event of --

7 **WITNESS POPE:** Before -- Smith 3 running is
8 a before case, and then Smith 3 off-line as a
9 secondary case, with everything else remaining the
10 same, except the generation, to see how the generation
11 changes.

12 **COMMISSIONER JACOBS:** Let me make sure. Did
13 that come out to what you think we're looking at here?

14 **MS. JAYE:** Yes. That the interruption would
15 have to be because of gas supply being interrupted.

16 **COMMISSIONER JACOBS:** Does that fall into
17 that?

18 **WITNESS POPE:** Gas supply -- this unit being
19 interrupted --

20 **COMMISSIONER JACOBS:** The reason for it
21 being off-line is a gas supply interruption.

22 **MS. JAYE:** I was going to say, another
23 incident like they had down at Perry last year when
24 the lightning strike caused the total interruption --
25 for whatever reason, gas is not getting into the unit;

1 a before-and-after picture.

2 **MR. MELSON:** Commissioner Jacobs, could I
3 try to ask a couple of clarifying questions? I'd like
4 to avoid a late-filed exhibit unless it's necessary.
5 Obviously, if it's necessary, we'll do whatever you
6 all need. Could I ask a clarifying question or two at
7 this point?

8 **CHAIRMAN GARCIA:** You're going to ask --

9 **MR. MELSON:** To the witness --

10 **CHAIRMAN GARCIA:** Okay. Why don't we let
11 Ms. Jaye finish, and then you can come back to that.
12 I think -- are you finished?

13 **MS. JAYE:** Yes, with that particular set of
14 questioning. I'm not finished with questions by any
15 means for this witness.

16 **CHAIRMAN GARCIA:** Let that distill in our
17 mind as well as everyone else's what exactly they are
18 asking for. Let's finish with Ms. Jaye's questions
19 and we'll come back to this.

20 **MR. MELSON:** I just don't want
21 Commissioner Jacobs to lose track what it was he was
22 asking for.

23 **COMMISSIONER JACOBS:** Sure. I'll try to
24 keep track. If we can take care of it on redirect,
25 then that's fine.

1 **MR. MELSON:** Okay.

2 **Q** **(By Ms. Jaye)** Mr. Pope, is the Smith site
3 physically capable of handling backup fuel tanks, i.e.
4 is there enough land there to handle backup fuel
5 tanks?

6 **A** There's enough land but there would be some
7 permitting and, probably, wetland mitigation that
8 would be gone through that we had not planned for,
9 anticipated.

10 **Q** Based on Gulf's view of its gas contract,
11 could gas be diverted to serve residential load during
12 severe weather either in Florida or elsewhere in the
13 United States?

14 **A** All natural gas transportation contracts can
15 be curtailed under the federal curtailment plan for
16 residential or end use. So, yes, this one could, just
17 as anybody else's could.

18 **Q** I ask you now to please turn to Page 45 of
19 Staff's exhibit which has been marked as Exhibit 7.

20 **A** I've got it.

21 **Q** Looking at this entire Study for this
22 question, this is Gulf's response to Staff's Request
23 for Production of Documents No. 21. Was this document
24 used to justify the Company's selection of the 13.5%
25 system reserve margin?

1 **A** That's correct.

2 **Q** Which factors ultimately led to the
3 selection of 13.5% as the optimum system reserve
4 margin for Southern Company?

5 **A** Overall, the reserve margin is intended to
6 cover the events of unexpected outage of units or
7 forced outages; abnormal weather conditions, which
8 usually indicates there would be a higher demand than
9 expected, and forecast error. Forecast error is to
10 cover errors out in the long term; beyond two to three
11 years out. Because when the forecasts are made,
12 that's the best estimate.

13 Your reserve margin is intended to cover you
14 for those events. The Southern electric system, in
15 its methodology of looking at the cost of putting in
16 generation to avert these events, as well as the cost
17 of what it would cost to lose the customer load,
18 balances those two to come up with the 13.5% as its
19 optimum target reserve margin.

20 **Q** Mr. Pope, as you may know, most of
21 Peninsular Florida's electric utilities use 15% as the
22 reserve margin criteria. What are the reasons that
23 the Southern Company can plan its system on a smaller
24 reserve margin?

25 **A** There are physical and geographical

1 differences between Peninsular Florida and the
2 Southern electric systems, as was other systems.
3 There are other economic drivers for a system over
4 another system. There's a difference in the forced
5 outage rates of units in various systems. There's --
6 another factor is tie assistance, I mentioned that
7 earlier. And that's the availability of tie lines
8 with other units which Peninsular Florida does not
9 enjoy the variety that the Southern electric system --
10 there are a number of factors that are different. I
11 believe even our methodologies and the way we look at
12 the factors we look at are different.

13 **Q** Does Gulf Power Company have its own
14 stand-alone planning criteria?

15 **A** Yes.

16 **Q** Could you please describe that criteria?

17 **A** For generation?

18 **Q** For deciding reserve margin criteria.

19 **A** Our overall reserve margin is driven by the
20 Southern Electric Reserve Margin Target, but Gulf
21 itself -- to give you an example, the Southern Reserve
22 Margin Target is 13.5%. But because of hour-by-hour
23 diversity and the way the total electric system adds
24 its hour-by-hour loads up, that requires Gulf to
25 maintain a 12.6% reserve margin in turn, as the Gulf

1 system alone, but that translates to a Southern
2 electric system reserve margin of 13.5% because not
3 all companies peak in the same hour.

4 **Q** Does this mean that Gulf plans its own
5 system additions to meet the 12.6% individual utility
6 reserve margin?

7 **A** That is correct. That is what we consider a
8 reasonable share of the Southern Electric System
9 Target.

10 **COMMISSIONER CLARK:** Is that what you
11 considerable a reasonable share or what Southern
12 Company System considers your reasonable share?

13 **WITNESS POPE:** It's both. We all agree that
14 is a reasonable share because of diversity. We all
15 agree at Southern Operating Companies to the 13.5%
16 target. It mathematically translates to 12.6.

17 **COMMISSIONER CLARK:** Let me ask you a
18 question: Do you happen to know what the target
19 reserve margin has been for, say, the last five years?

20 **WITNESS POPE:** Up until 1999, the target
21 reserve margin for planning purposes has been 15%.
22 But back in '97, when this document, this Reserve
23 Margin Study was conducted, at that time the
24 conditions determined that a 13.5% reserve margin
25 target was sufficient. As was mentioned in the Need

1 Study, we are reevaluating that at this time.

2 **COMMISSIONER CLARK:** Let me ask you, from up
3 until 1997 it was 15% reserve margin, or could we say
4 that's in the reserve margin, say, since 1985?

5 **WITNESS POPE:** I can't say for '85, but I
6 can say from '89 on for sure. For ten years.

7 **COMMISSIONER CLARK:** And you have no
8 explanation as to why the 13.5% was decided on. What
9 were the factors? Was it your units are running
10 better -- what do you call it -- load factor?

11 **WITNESS POPE:** Equivalent forced outage rate
12 is lower a little bit in the study results. The
13 economics of the cost of expected unserved energy or
14 the cost of a customer's outage were lower in the 1997
15 study than they were in the previous year's study.

16 **COMMISSIONER CLARK:** Explain that to me.
17 The cost to the customer of the outage was lower so
18 that you decided -- the economics said it's worth it
19 to carry less on our reserve margin?

20 **WITNESS POPE:** When you balance the cost of
21 putting in generation with the cost of -- a perceived
22 outage of a customer would be, if the economics are
23 driven in that direction, then the curve comes down to
24 a lower reserve margin level.

25 That's one of the major factors of why we're

1 re-evaluating now, is because we're finding that the
2 market conditions have changed since 1997 to where the
3 cost of providing that unserved energy, or for
4 avoiding that unserved energy in the marketplace are a
5 little higher, which drives your curve to the right,
6 upward a little bit. But in that year, yes, the
7 conditions --

8 **COMMISSIONER CLARK:** How do you determine
9 the cost to the customer for not getting electric
10 services?

11 **WITNESS POPE:** By survey. It's the same
12 survey methodology that was employed by Duke and by
13 Florida Power Corporation in their what they call the
14 Societal Cost of Outages Studies -- back in the late
15 '80. Where you go and you ask customers two
16 questions. One question is "You're going to be
17 outaged for one hour at 5 p.m. on a Friday afternoon,
18 hot summer day. The question is: How much would you
19 pay us to not outage you for that one hour? Or how
20 much would you be willing to accept from us to be paid
21 for that outage?" You get a number of answers in that
22 bracket and you come up with what is the cost of that
23 outage to the customer.

24 **COMMISSIONER CLARK:** So if electric prices
25 go high enough, then you might have no reserve margin.

1 **WITNESS POPE:** If electric prices go --
2 that's correct. The customer would say, "No, I'm not
3 willing to pay anything."

4 **COMMISSIONER CLARK:** And you rely on their
5 statement that "I won't pay any more than that," or
6 "I'm okay with you interrupting me if it's going to me
7 cost X amount."

8 **WITNESS POPE:** Well, Commissioner, without
9 getting into details of the survey document, or survey
10 study, just on a broad basis, if you can think about
11 those two questions, yes, the answers could be widely
12 different.

13 What I'm willing to pay you to avoid that
14 outage was very small. Because I'm supposed to get
15 power from you anyway. Yet how much would you be
16 willing to get paid by the power company to accept the
17 outage? "Well, I want to you pay me \$1 million." You
18 have to bring those down into reality as to what
19 really happens.

20 I'm not an expert on how they do all of this
21 stuff, but the company that was employed, that I
22 mentioned earlier, they are widely regarded as one of
23 the experts in the field to determine this
24 information.

25 **COMMISSIONER CLARK:** Are you saying a

1 primary driver of it coming from 15% down to 13.5% is
2 what customers would pay?

3 **WITNESS POPE:** No. It's combination of
4 things, Commissioner. One of the assumptions in the
5 early studies was the mix or the blend of customers
6 that would be outaged; that would actually be taken
7 off-line if there were no power available and you
8 needed to drop customer load. That had an allocation
9 of classes: Industrial customer, commercial and
10 residential. One of the factors is, is that it was
11 determined that really you would not, probably,
12 interrupt any industrial customers -- or very few.
13 You would probably not interrupt --

14 **COMMISSIONER CLARK:** Was it 13.5%?

15 **WITNESS POPE:** No, ma'am. No. But let me
16 just summarize it. The allocation of the --
17 allocation of customers that would be outaged -- the
18 assumption of allocation of customers that would be
19 outaged in the previous 1994 study changed to a more
20 residential interruption strategy.

21 The residential customers are the lowest
22 cost from a customer outage standpoint. To give you
23 an idea of what their relative ranking compared to
24 commercial, a residential customer would say "It's \$2
25 a kilowatt-hour if you interrupt me." Relatively a

1 commercial customer would say "It's \$8 a kilowatt-hour
2 to interrupt me because of lost sales." It's less
3 costly to interrupt residential customers. It was
4 also felt since it's less costly and less pain, that
5 that's who would get interrupted more often.

6 That changed your assumptions in the '97
7 study which drove your cost of outages down a little
8 bit. When you drive your cost of outages down, it
9 says you don't need as much capacity.

10 **COMMISSIONER CLARK:** That's my question. Is
11 that the primary driver of bringing the 15% down to
12 13.5?

13 **WITNESS POPE:** That's the primary driver of
14 that assumption -- of that result.

15 **COMMISSIONER CLARK:** Okay. 1.5% in the
16 reserve margin. What is your loss of load probability
17 with that?

18 **WITNESS POPE:** Commissioner, we don't use
19 loss of load probability, we use expected unserved
20 energy, which is driven by loss of load hours but not
21 loss of load probability.

22 **COMMISSIONER CLARK:** So your expected
23 unserved energy will be higher under the 13.5 than the
24 15%; is that correct?

25 **WITNESS POPE:** That's correct.

1 **COMMISSIONER CLARK:** Is this the first time
2 we've used that survey in determining what the reserve
3 margin should be?

4 **WITNESS POPE:** I don't believe so,
5 Commissioner.

6 **COMMISSIONER CLARK:** When did you start
7 using it?

8 **WITNESS POPE:** 1990, I believe.

9 **COMMISSIONER CLARK:** Thank you.

10 **Q** **(By Ms. Jaye)** Mr. Pope, if you would,
11 please, turn to Page 97 of Staff's Nonconfidential
12 Exhibit No. 7.

13 **A** I've got it.

14 **Q** Well, there's a graph in the middle of the
15 page entitled "Optimum System Planning Reserve Margin
16 Minimum Cost Calculation 13.5%, Three-year Lead Time."
17 Could you please explain this curve and what it means?

18 **A** The curve represents the summary of both the
19 cost of customer outages and the costs of generation
20 to avoid those outages. On this particular graph in
21 black and white the darker bars to the left
22 representing -- particularly the first one, represents
23 the total cost of outages with no generation additions
24 to forgo those outages. And as you move towards the
25 right, you'll see a linear extrapolation of bars, or

1 shades, that represent the cost of generation
2 additions. And when you -- corresponding to those,
3 generation additions would be less expected unserved
4 energy, therefore, your cost goes down.

5 When you add the two together, that results
6 in the resulting bar representation costing.

7 **COMMISSIONER DEASON:** Is this graph -- is it
8 hypothetical or these are the actual results of the
9 Study?

10 **WITNESS POPE:** Those were the results of the
11 Study.

12 **COMMISSIONER DEASON:** It would show then
13 there's really not much incremental or significant
14 change within the range of 13.5% up to 15%?
15 Although -- in other words, those columns look to be
16 about the same height.

17 **WITNESS POPE:** That's correct.

18 And you can look -- from another standpoint,
19 Commissioner, you're correct, the slope or increase of
20 the curve toward the right is far less than to the
21 left.

22 **Q** **(By Ms. Jaye)** How much capacity will Gulf
23 Power need in its system in 2002 to meet the reserve
24 margin or reliability criteria, the 13.5 on the
25 Southern system and 12.6 on the Gulf system?

1 **A** 427 megawatts.

2 **Q** Is this 427 megawatts needed to satisfy the
3 13.5% reserve margin criteria set by Southern?

4 **A** That is 427 megawatts to bring Gulf's
5 reserves to 12.6, which mathmatically apply to the
6 13.5%.

7 **Q** How much new capacity does Southern Company
8 have to add typically each year in order to satisfy
9 its reliability criteria?

10 **A** If it were to add it every year?

11 **Q** Yes.

12 **A** It's in the range of 25 to 30 megawatts of
13 growth a year and demand.

14 **Q** How much new capacity does the Southern
15 Company system typically need to add each year to
16 satisfy its reliability criteria?

17 **A** I believe it's in the range of 600 megawatts
18 a year.

19 **Q** And this question is for clarification.
20 Among the Southern Company member utilities, is it now
21 Gulf's, quote, "turn" to add capacity because it is
22 the primary driver for Southern's 2002 capacity needs?

23 **A** I wouldn't characterize it as Gulf's turn.
24 It's just that there are not other available either
25 purchases or temporary excesses on the Southern

1 electric system which Gulf can rely upon to meet its
2 reserve requirements.

3 If other companies were adding capacity
4 already, and had -- there were some temporary excesses
5 of 30 megawatts here and there, and Gulf could
6 possibly rely on that other than adding a unit -- but
7 it's come to the point where we've purchased, in short
8 term, as much as we have. Those things run out at the
9 end of 2001. Other companies are in the same boat.
10 Other Southern electric system companies are in the
11 same boat. What's available out there is more
12 expensive and less available, so all companies are
13 having to add. Gulf is just one of them.

14 **Q** How does Southern Company members share
15 system reserves? How are they allocated? And which
16 utilities are the primary suppliers of these reserves?

17 **A** I believe -- could you ask the question
18 again? Because when asking a question of allocating
19 reserves, there's mechanisms -- I think Mr. Howell
20 would probably be best to answer this one, because it
21 may get into the intercompany interchange.

22 From a operational standpoint, the system is
23 essentially just by Southern pool, so to speak, and on
24 a day-to-day basis there is no allocation -- from a
25 planning aspect there is. If that's the question,

1 then ask me from that aspect.

2 Q Do the larger member companies of the
3 Southern Company system provide most of the system
4 reserves?

5 A In past years that has been the case because
6 larger companies end up adding larger units. Gulf
7 being a relatively small member of the Southern
8 electric system, with only a growth of 25 to 30
9 megawatts, it's not economically realistic to add
10 those kind of megawatts and increments every year,
11 whereas a Georgia Power Company or an Alabama Power
12 Company, adding larger units has occasionally a 30- or
13 40-megawatt reserve excess in a year or two, a
14 temporary excess, that us, smaller companies, can rely
15 upon, until they grow in it or until other things
16 avail -- such as the situation in 2002, where we need
17 to have an economic batch of electricity.

18 Q Are those excesses in capacity in the bigger
19 companies, such as Georgia Power and Alabama Power,
20 allocated such that each member utility will be able
21 to maintain its 12.6% reserve margin?

22 A In the planning arena, yes. When you look
23 at what -- on a plan basis, capacity resources are
24 planned to be installed and what loads are with the
25 various companies. If there is an excess, a temporary

1 excess that year, one company being long -- for
2 instance, let's assume that Georgia Power Company were
3 long 150 megawatts, you would look at the other
4 operating companies that have less than their optimum
5 portion of the Southern electric system reserves and
6 it would be allocated on need. After that's done, if
7 there's still more need, everybody would decide on
8 what's the best way to add to the Southern System
9 reserves.

10 **CHAIRMAN GARCIA:** Let's take a break. We're
11 going to take a -- do you need a quick break? Take
12 lunch or --

13 **MS. JAYE:** 30 minutes will be sufficient.

14 **CHAIRMAN GARCIA:** Let's take lunch. Let's
15 go to 1:00:

16 (Thereupon, a lunch recess taken from
17 12:15 a.m. to 1:00 p.m.)

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19 (Transcript continues in Volume 2.)

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